

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 798.—Vol. XX.]

LONDON, SATURDAY, DECEMBER 7, 1850.

[PRICE 6D.]

**VALUABLE COAL MINE FOR SALE.**  
**MR. BROUGH** will **SELL, BY AUCTION**, on Tuesday, the 17th day of December, 1850, at Twelve o'clock at noon, at Mr. Brown's Tuff Hotel, NEWCASTLE-ON-TYNE, the MINES OF COAL within the FARM OF HOLYWELL GRANGE, situated in the parish of EARSIDE, in the county of NORTHUMBRIA, comprising ONE HUNDRED and THIRTY-ONE ACRES, or thereabout, which are wrought by means of pits upon the farm, and in the occupation of Messrs. Plummer & Co. For further particulars apply to Mr. Henry William Fenwick, or Messrs. Claytons and Dunn, solicitors, Newcastle-on-Tyne.

**MONTGOMERYSHIRE.**  
**TO MINING SPECULATORS AND CAPITALISTS.**—TO BE SOLD, BY PRIVATE CONTRACT, either TOGETHER or SEPARATELY, all those very promising LEAD MINES, called RHYDYBENWCH and CROWLWM, situated in the parish of LLANDILOES, in the county of MONTGOMERY, together with all the ORE raised and now thereon.  
**RHYDYBENWCH** MINE is distant from Llandiloes about 7 miles, and near the very productive mine called Nantmellyn. An adit level has been driven, and a shaft sunk, in which the lode shows itself about 4 feet wide at present.  
**CROWLWM** MINE is situated within 4 miles of Llandiloes, on the banks of the River Clwyd, and not far distant from that well-known and very valuable mine called Brynallt, the lode of which, it is believed, runs through it.  
The working of the mines on sale commenced only very lately, and satisfactory reasons will be assigned for disposing of them. There are several lodes in the pits, which are very extensive, and there is ample water-power, and it only requires a small additional outlay to bring them into a state of profit. The whole will be sold upon very moderate terms, and with immediate possession.  
For further particulars, and to treat for the mines, apply to Mr. William Jerman, the younger, builder, Llandiloes.

**EXTENSIVE IRON-WORKS AND MINERAL LEASES**  
FOR SALE, BY PRIVATE BARGAIN.—The BLAIR IRON-WORKS, belonging to the AYRSHIRE IRON COMPANY, situated in the parish of DALRY and county of AYR, consisting of TWO BLOWING ENGINES, FIVE BLAST-FURNACES, FOUNDRY, PIT ENGINES, and other requisite utensils for the furnaces and working the minerals, all in working order, besides nearly TWO HUNDRED WORKMEN'S HOUSES. The extensive MINERAL FIELDS consist of BLACKBAND, IRONSTONE, COAL, LIMESTONE, and FIRE-CLAY, held under long leases, at moderate fixed rents and royalties, all in the immediate neighbourhood of the furnaces; and the works having a connection with the Ayrshire Railway, command great facilities for transit and export of the produce. There is a large STOCK of IRONSTONE on the ground, which may be had at a valuation, and considerable progress has been made in the  
**ERECTION OF MALLEABLE IRON-WORKS.**  
In connection with the furnaces, which may also be had.—The above are well worthy the attention of capitalists and parties in search of mineral fields.  
For further information apply to Mr. Brown, 35, St. Vincent-place, Glasgow.

**FOR SALE, BY PRIVATE CONTRACT.**—A 49-inch cylinder PUMPING ENGINE, 8-foot stroke, equal beam, with new condensing work, and boiler of 10 tons.—Price £280.  
A 32-inch cylinder PUMPING ENGINE, 9-foot stroke in the cylinder, and 8-feet in the shaft, with boiler, &c., 10 tons.—Price £250.  
Also, a 20-inch cylinder PUMPING ENGINE, of 4-foot stroke, equal beam, suitable for proving a small mine.—Price £100.  
For further particulars apply to Capt. Evans, jun., Pool, Cornwall.

**VALUABLE MINERAL PROPERTY TO BE IN PART OR WHOLLY DISPOSED OF.**—This most desirable METALLIFEROUS SETT, consisting of nearly 200 acres, is situated in one of the renowned mining districts of central WALES. One discovery of SILVER-LEAD ORE, made upon it some few months ago, was considered of an singular and promising nature, that a brief account of it was then published, and subsequently copied into most of the leading papers of the kingdom. Since that period a shallow sink has been made on the lode, which is 14 feet wide, traversing a beautiful soft whitish killas. The analysis of the ore, of which there is about 20 tons on the bank, gives 75 per cent. of lead and 80 ounces of silver to the ton; indeed, the last assay of the ore, found surface, gave the extraordinary quantity of 220 ounces of silver to the ton. There is a fine mixture of lead ore at the bottom of the present shallow sink. The mine is but 9 miles (of good turnpike-road) from the shipping port, and a fine stream of water runs close past it, offering every facility for the development of its invaluable mineral resources.  
For further particulars apply (post-paid) to "X. Y. Z." at the office of the Mining Journal, 26, Fleet-street, London.

**VALUABLE MINERAL PROPERTY TO BE LET, ON MOST ADVANTAGEOUS TERMS.**—This most desirable METALLIFEROUS PROPERTY, consisting of nearly TWO HUNDRED ACRES, is situated in the parish of HIRNANT, MONTGOMERYSHIRE, and in the immediate vicinity of the celebrated Llanygno and Craig Dea Lead Mines.  
The following is a REPORT of Captain JAMES THOMAS, of the Chirk Castle and Llanygno Lead Mines:—  
MR. JOHN HANCOCK, Dear Sir: In compliance with your request I surveyed your mineral property, situated in the parish of Hirnant. The geological formation of the rock is decomposed slate and trap rock, dipping south-west. In the north side of your property I perceive a lode, or vein, of lead, of great promise; and from the general character and formation of the lode, at the surface, the composition and structure of the rock, I consider it worthy of trial; and it is my belief, that if properly explored, you would have a productive lead mine in this quarter; and cannot but express my surprise that such a vein should be so long neglected. About 200 yards south, and lower down the hill side, is a vein of slates, of vast extent, of the highest and most productive order; in the tabular structure and purity of metal, with other fine qualities, I consider them equal, if not superior, to any slates in the neighbourhood. On the south side of the river, on your property, there is also another lode, a continuation of which runs through the Craig Dea Lead Mine, which I yesterday saw the men working on—a beautiful course of ore, from 18 to 20 inches wide.  
I am, Dear Sir, yours respectfully,  
JAMES THOMAS.  
Nov. 16, 1850.  
For further particulars to treat for the above, apply to Mr. John Hancock, Penn, near Wolverhampton, Staffordshire.

**MINES.—TO BE LET, ON LEASE, THE WHOLE, OR A PART,** of the very valuable MINES OF COAL and IRONSTONE remaining to be got in the FENTON PARK ESTATE, which consists of the PATCHES FARM, the YEW TREE FARM, and the FENTON PARK FARM, containing together 197A, 347r, or thereabout, situated at FENTON, in the parish of STOKE-UPON-TRENT, and county of Stafford.  
This Estate is distant from the canal, at Stoke, about 1 mile. There are many shafts in the estate, which are sunk through nearly the whole of the ironstone measures. The ironstones are of good quality, and there is an abundance of ironstone in the ground. According to sections taken in the Fenton Park Estate, and in adjoining property, there is a thickness of ironstone of from 4 to 10 feet, cropping out on this estate. The inclination of the strata is about 10 in 36.  
There is in this estate, within a moderate depth from the surface, a sufficient quantity of good coal for the purposes of calcining the ironstone and working the engines. The deeper mines of coal in this estate are of a superior quality; and if it be required they would be let along with the shallow mines of coal and the ironstones. The ironstone mines would be got very cheap, and there would be no water to draw in getting them.  
There are several steam engines and colliery utensils on the estate that would be taken by the lessee at a valuation.  
For any further information respecting these mines apply to Mr. Charles Bromley, of Motley, near Darlaston.

**LIANES MINING ASSOCIATION.**—At the Half-yearly General Meeting of proprietors, held at the offices of the Company, on Thursday Nov. 28, 1850, **THOMAS FIELD, Esq.**, in the chair.  
It was resolved, That the Directors be empowered to raise the further capital sum of £6750 by the issue of 4500 additional shares, on which the sum of £1 10s. shall be paid as follows:—10s. per share on the 1st of January next; 5s. per share on the 1st of Feb.; 5s. per share on the 1st of April; 5s. per share on the 1st of June, and the remaining 5s. per share on the 1st of August next; and that on the due payment of such sum of £1 10s. per share, in accordance with the following resolution, such shares shall rank with and be entitled to share equally in all the advantages to be derived from the original shares of this Association.  
It was also resolved, That if any instalment on the 4500 shares to be now issued shall remain unpaid 15 days after the days on which such instalments shall be due, in accordance with the preceding resolution, such shares may be declared forfeited by the directors, and shall be absolutely forfeited accordingly.  
Resolved, That application for the said 4500 shares, now to be issued, be made to the Secretary in writing, on or before the 20th of December; and the said shares shall be allotted by the Directors to the existing shareholders in this Association in proportion to the number severally held by them, but that if any remain to be allotted after the 20th of December, such shares may be allotted at the discretion of the Directors.  
In accordance with the above resolutions, applications from the shareholders for the additional shares will be received at the offices, No. 2, New Broad-street, until the 20th inst., addressed to  
G. EATON, Secretary.

**STIRLING'S PATENTS FOR IMPROVEMENTS IN IRON.**—1. TOUGHENED CAST-IRON, which is double the strength of ordinary cast-iron, and only from 10s. to 12s. per ton extra.  
2. ANTI-LAMINATING RAILS AND TIRES FOR WHEELS at an extra price of about 7s. 6d. per ton. Also IMPROVEMENTS IN THE MAKING OF WROUGHT-IRON—saving one process to the manufacturer.  
Further particulars and terms of license, &c., may be obtained on application to Mr. Jos. civil engineer, No. 6, John-street, Adelphi, London; also from the London agents, Messrs. GARDEN and MACANDREW, 34, Dowgate-hill; and the Scotch agents, Messrs. W. and J. H. Johnson, 169, Buchanan-street, Glasgow and 20, St. Andrew's-square, Edinburgh.

**MR. JAMES CROFTS** tenders his SERVICES to CAPITALISTS for the PURCHASE of BRITISH MINING SHARES, whether on a large or small scale; and will be happy to indicate such mines as present the greatest chance of permanent dividends, or ultimate success of the workings, either at the request of his correspondents, or in reply to specific inquiries. The utmost punctuality in attending to communications from the country may be relied upon; and by transacting business only for PRINCIPALS, Mr. Crofts hopes to establish an identity of interests between his friends and himself.

JUDICIOUS PURCHASES IN ESTABLISHED DIVIDEND MINES will INSURE a HIGH RATE of INTEREST per annum, varying from 10 to 20 per cent.

**MR. CROFTS HAS SPECIALLY FOR SALE—**  
Bedford United (15 shares)  
East and South Tamar (15 shares)  
Wheal Crobar (10 shares)  
Peter Tavy and Mary Tavy (20 shares)  
Wheal Fortescue (30 shares)  
Bodmin Consols (20 shares)  
Wheal Augusta (15 shares)  
Warleggan Consols (30 shares)  
South Carn Brea (20 shares)  
Lamheroo Wheal Marks (30 shares)  
Twistock Consols (30 shares)  
Wheal Franco (30 shares)  
Mr. Crofts issues a PRICE CURRENT of Mining Shares twice each week, which may be had on application.  
Dated No. 4, King-street, Cheapside, December 7, 1850.

**MR. EVAN HOPKINS, C.E., F.G.S., &c., CONSULTING MINING ENGINEER.**  
OFFICE, No. 13, AUSTIN-TERRACE, LONDON.

MR. HOPKINS may be consulted daily by Noblemen, Gentlemen, and Capitalists, who have invested, or may wish to invest, their capital in MINES or MINERAL PROPERTIES, on all matters connected therewith (Home and Foreign).  
This office is the only one of the kind in the kingdom. No dealings in shares—is independent—having no connection with any party.  
To avoid abuses, it is requested that no notice will be taken of any representations respecting mines, if they are favourable or unfavourable—without being authenticated.  
The object is to see justice done to the capitalists and property, and consultations on questions connected with general science.  
Every description of Mineral Property inspected and reported on—on the Continent as well as the United Kingdom, and distant capitalists may receive periodical advice.  
N.B.—Being a responsible and confidential business, and having a very extensive connection, it becomes necessary to acquaint those who apply for reports, that they must be paid for on delivery, at his office, otherwise they cannot be attended to.

**MINING AND GENERAL AGENCY AND AUCTION OFFICES.**—52, THREADNEEDLE-STREET, LONDON.

Messrs. R. TREDINNICK and CO. beg to inform their Friends, Capitalists, and the Public, that their SALES, BY AUCTION, OF MINING, RAILWAY, and OTHER SHARES, take place every WEDNESDAY, at Twelve o'clock, at their SALE ROOMS, in the HALL OF COMMERCE—commencing on the 13th inst.

Messrs. TREDINNICK & CO. hope that the arrangements they have made will afford that convenience and advantage to those embarking in mines, railways, &c., so desirable and necessary to ensure the ready and effective purchase and sale, and which the importance and magnitude of such property demands.

SHARES of every description, whether on a SOLD ON COMMISSION, and MONEY-TARY MATTERS of every kind NEGOTIATED; Market Value of Shares, Statistical and other Information afforded gratuitously, upon application.  
Messrs. T. & Co. offer to the mining world the opportunity of exhibiting in their Public Sale Rooms, Reports, Plans, Sections, and Specimens of Mines and Mineral Districts, whether situated in the United Kingdom, Foreign, or Colonial Possessions, upon forwarding the same, free of expense, as well Plans, Sections, and Valuations of Estates, Houses, and other Property for Sale.  
To prevent disappointment and inconvenience, they respectfully request that shares be entered for sale at auction two days previous to sale; and shares from country correspondents to be forwarded either to Messrs. T. & Co., or to a town agent, two days antecedent to sale. A deposit of 25 per cent. to be paid on all purchases of shares, and the residue within three days thereafter.  
Conditions of sale, with printed catalogues, may be had on application at Messrs. Tredinnicks' offices, Hall of Commerce, Threadneedle-street.

Messrs. R. T. & Co. further request that agents and resident shareholders in Cornish and Devon Mines, will forward to the office, for the inspection of London shareholders in mines the two-monthly statements of accounts, together with other information likely to affect the value of shares; in return for which they will be happy to render them at all times every service in their power, and promote the general success of mining, by diffusing correct and detailed information to the public respecting the position and legitimacy of British mining.

The following is a list of some of the dividend-paying and other mines:—  
West Buller  
Carn Brea  
Seton  
Devon Great Consols  
Stray Park  
Treviskey and Barrier  
Trencoft  
South Bassett  
Great Wheal Basset  
North Bassett  
Wheal Reeth  
Levant  
South Tolgus  
East Wheal Rose  
North Pool  
Alfred Consols  
Barnstaple  
Comfort  
Condor  
Cook's Kitchen  
East Wheal Frances  
East Crinnis & Pembroke  
East Wheal Russell  
East Wheal Crofty  
East Wheal Keeth  
Gustavus Mines  
Great Wheal Baddern  
Hawk's Point  
Holmbush  
Lewis  
Llanres  
Pen-y-bank & Ergild  
Pendarras Consols  
Peter Tavy & Mary Tavy  
Barnstaple  
St. Aubyn and Grylls  
South Wheal  
Tamar Consols  
The Worthing  
Trefusis  
Tremayne  
Trellick Consols  
Wellington Mines  
West Wheal  
West Polgooth  
West Seton  
West Frances  
West Wheal Jewel  
West Treasury  
West Park Consols  
Wheal Tryphena  
Wheal Harries  
Wheal Margaret

Among the shares submitted for sale, on Wednesday, the 18th inst., will be included some in most of the above mines.

**CHYPRASE CONSOLS MINE.**—situated in the parish of SAINT ENEDOR, CORNWALL.

At the First General Meeting of Shareholders in the above-named company, held at 36, Newhall-street, Birmingham, on Tuesday, the 3d of December, 1850, the following resolutions were proposed and agreed to unanimously:—  
It was moved by Mr. Hinks, and seconded by Mr. Banks, That the report of the provisional committee be received and adopted, and their acts confirmed.  
Moved by Mr. Parriah, and seconded by Mr. Lewis, That the satisfactory report of Capt. James Michell be received and entered upon the minutes.  
Moved by Mr. Lewis, and seconded by Mr. Banks, That the following gentlemen be appointed on the committee for the general management of the company—Mr. Henry Parriah, Mr. Augustus Yates, Mr. William Collins Morgan, and Mr. Charles Hinks.  
That the committee meet monthly at Birmingham.  
That a general meeting of shareholders be held half-yearly at Birmingham.  
That Capt. Jas. Michell, of St. Enedor, Cornwall, be, and is hereby appointed, mine agent.  
That Mr. Thomas Lewis, of Birmingham, be, and is hereby appointed, purser.  
That John Barker, and Henry Parriah, Esqs., be, and are hereby appointed, trustees; and that the National Provincial Bank of England be, and is hereby appointed, bankers to the company.

**AGENT'S REPORT.**  
Chyprase Consols Mine, Nov. 22, 1850.  
GENTLEMEN.—I beg to inform you that, since our commencement in the above mine, we have opened levels to take off the water from the wheel, about 150 fms. in length, average about 9 feet in breadth, and about 7 feet in depth; timbered about 50 fathoms of those levels, and some part of them we have stoned up; we have opened the ground for the wheel and bob, 36 feet in length, 11 feet in breadth, and 10 feet in depth; put in the wheel-frame, and secured the wheel-pit and bob-pit with timber; made all roads that are necessary for the time to carry the materials to the engine-shaft; built a blacksmith's shop, and shall complete the forge on Monday for the smith to work in; made leads to carry off the surface water from the mine to the main river; made a saw-pit to saw the timber in for the mine, and I am now building a house about it, which will also do for a carpenter's shop, and I have no doubt of completing the same next week; made about 170 new leads, 5 feet in breadth, and 3 feet in depth; made one new bridge over the same under the parish road; repaired about 200 fathoms of old leads—those leads are to carry the water to work the wheel. We have got the wheel-axis on the frame, and shall now go on putting the wheel together, making the launders, &c. The engine-shaft is down 20 feet from the surface, and we are still sinking the same, and I have no doubt we shall be able to go on with it by baling the water out until we get the wheel to work. This shaft is 9 feet in length, and 7 feet wide, and one end is 5 feet; and it is the most beautiful-looking ground I have ever before seen, and I assure you that a more productive stratum of ground for mineral wealth I have never before beheld, and there is every indication that our most sanguine expectations will speedily be realised, when we cut the lodes at the 30 fathom level. I am, Gentlemen, your most obedient servant,  
The Committee of Chyprase Consols Mine, Birmingham. JAMES MICHELL.

**WANTED.—A WATER-WHEEL**, about 35 feet diameter, and 4 to 6 feet broad, calculated for PUMPING PURPOSES.—Any parties having a wheel about this size for sale, are requested to send particulars to J. E. Square, Esq., solicitor, Plymouth; or to W. L. Ternan, secretary, Warleggan Mining Company, 28, Threadneedle-street, London.

**TO CAPITALISTS.**—The ADVERTISER can POINT OUT a TRACT OF COUNTRY, 10 miles long, containing LEAD ORE, on a Champion Lode, worked at the east and west ends. The intermediate ground, about 5 miles long, on the course of the lode, is free for adventure at 1-20th dues.—Further particulars may be obtained by *bona fide* principals, on application by letter, free, to "N. N.," Waddington-terrace, Stratford, Essex, who will forward samples and report.

**FOR SALE.—A 10-horse PATENT ROTARY ENGINE**, with new boiler, steam-pipes, cog-wheels, drum, &c., complete.—For price and particulars apply to Mr. Edward Bagot, mineral surveyor, Llanelli.—Nov. 26, 1850.

**TO FOREIGN CAPITALISTS OR OTHERS.—TO BE DISPOSED OF**, a very VALUABLE PATENT FOR FRANCE, and also ONE FOR BELGIUM, both taken out in the year 1843, for an invention for which Letters Patent had previously been granted for Great Britain and Scotland, and which is now in successful operation in many of the large mining districts. The price at which the above would be sold will yield a very large return upon the purchase-money.  
Full particulars may be obtained by addressing a letter (pre-paid) to "L. M.," at the office of the Mining Journal, 26, Fleet-street, London.

**FRANCE AND BELGIUM—VALUABLE PATENT RIGHTS.**—FOR SALE, a PATENT, secured in FRANCE and BELGIUM, for an INVENTION connected with RAILWAYS and the MANUFACTURE OF IRON, now in successful operation in this country, and which has been most favourably reported on by the highest authorities.—Address "B.," at the office of the Mining Journal, 26, Fleet-street, London.

**BLOCK FUEL MANUFACTURED FROM COAL**, WITHOUT ADMIXTURE OF TAR OR ANY OTHER SUBSTANCE, save that which is contained in the coal itself. This valuable FUEL is now SUPPLIED to the PUBLIC, in large or small quantity, at a reasonable rate, and may be obtained on application to the agents, Messrs. Key and Mitchell, 103, Newgate-street, London.

**RAILWAY SHARES, CONSOLS, ENGLISH & FOREIGN STOCKS, and MINING SHARES, &c., BOUGHT AND SOLD** at the CURRENT PRICE of the day, either for Money or the Account.—CASH ADVANCED upon approved RAILWAY SHARES, for given periods, on moderate terms.  
COUNTRY AGENCIES UNDERTAKEN.  
A daily and hourly list of prices may be seen, and every information given, either for investment or speculation. BROAD & CO., No. 9, BELL-YARD, DOCTORS' COMMONS, LONDON.

**SHARES ARE TO BE SOLD** in the following MINES:—  
Levant, St. Just. Trellick Consols, near St. Ives.  
Betalack, St. Just. West Wheal Treasury, Gwennar.  
Wh. Castle & Bosweden, St. Just. West Ding Dong, Saneared.  
Apply at the offices of Mr. Batten, 1, Crown-court, Old Broad-street.

**WHEAL MARY ANN SHARES WANTED TO PURCHASE.**—A Gentleman wishes to PURCHASE, for investment, a FEW SHARES in WHEAL MARY ANN LEAD MINE, Menheniot, Cornwall.—Direct to S. Howard, Stonebridge-house, Kingsland, stating lowest price.

**MINING PROPERTY.—BUSINESS** transacted in every description of MINING PROPERTY, SHARES BOUGHT AND SOLD, ADVICE GIVEN TO PARTIES as to INVESTMENT, ADVANCES OF MONEY MADE on this DESCRIPTION OF PROPERTY. Statistics given on Mines, and the earliest information obtained from the mineral districts.—Apply to DUBANT & CO., Mining Sharebrokers, 28, Lombard-street.

**MINING SHARES.**—Mr. JOHN CREFT, No. 1, ROYAL EXCHANGE-BUILDINGS, LONDON, OFFERS his SERVICES, ON COMMISSION, to BUY and SELL MINING SHARES, and will select for capitalists those with the greatest chance of success, and take pleasure in furnishing a list of prices, together with all particulars.

**MINING OFFICES.**—48, THREADNEEDLE-STREET, LONDON.—Messrs. T. FULLER & CO. beg respectfully to inform the public that they are in a position to BUY and SELL SHARES in all the DIVIDEND-PAYING MINES, and have on hand Devon Great Consols, Levant, North Venton, West Caradon, Bedford United, Peter Tavy and Mary Tavy Consols, South Carn Brea, Warleggan Consols, Calstock Consols, Wheal Russell, East Wheal Russell, West Goginan, Wheal Harris, &c. &c.—Mining shares pay from 15 to 30 per cent.

**MINING OFFICES.** ST. MICHAEL'S CHAMBERS, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.  
MR. R. TRIPP, MINING AGENT, has FOR SALE SHARES in most of the best DIVIDEND-PAYING MINES and others, which will pay the purchaser, at present prices, from 15 to 35 per cent.

**MINES.—MOLYNEUX & CO., 6, FINSBURY-PLACE** SOUTH, and 6, WEST-STREET, FINSBURY-CIRCUS, have SHARES FOR SALE in DIVIDEND-PAYING and OTHER MINES, which will ensure to capitalists the safest and most unexceptionable investment.—Office hours from Ten to Five o'clock.

**MR. R. TREDINNICK** begs to OFFER his SERVICES in the PURCHASE or DISPOSAL of SHARES in MINES. With an extensive connection in the several mining districts, he will be happy to acquire and afford every information connected therewith, and which may be at all times obtained on application at his offices.—Hall of Commerce, Nov. 30, 1850.

**MANUEL and CO., MINING AGENTS**, are instructed to SELL in the following DIVIDEND-PAYING MINES:—Great Wheal Baddern, Rannaford Combe, Great Wheal Michell, West Wheal Rose, Wheal Emily, Pentire Glaze, South Caradon, and others.—Office, 42, Fleet-street-hill, London.

**MANDEVILLE & CO.** beg to call the attention of the Public to the fact, that CAPITAL judiciously INVESTED in MINES will return a profit of from £15 to £35 per cent.—SHARES BOUGHT and SOLD.—Every information given, and agents sent to inspect mines, if required.  
22, Change-alley, Cornhill.

**MR. JAMES STRIDE, MINING SHARE DEALER** and COMMISSION AGENT (late of Spring-Gardens), No. 111 A, JERMYN-STREET, ST. JAMES'S, LONDON.

**MR. JOSEPH J. BAKER, METAL BROKER AND GENERAL COMMISSION AGENT, WOLVERHAMPTON.** OFFICES—MARKET-PLACE.

**MR. JOHN DAVIES, MINING SHAREBROKER,** No. 38, TOWER-BUILDINGS, TOWER-GARDEN, LIVERPOOL.

**MESSRS. BOXALL & CO., MINING SHARE DEALERS,** 5, CROSSBY HALL CHAMBERS, BISHOPSGATE-STREET.

**JAMES LANE, MINING SHARE DEALER,** 80, OLD BROAD-STREET, LONDON.

**GENERAL MINING COMPANY FOR IRELAND.**—Notice is hereby given, that at the Half-yearly Meeting of the proprietors, on Monday last, a DIVIDEND of TEN PER CENT. was declared on the capital stock of the Company for the past half-year, PAYABLE on and after the 30th inst., between the hours of Ten and Three o'clock. THOMAS MACGUIRE, Secretary.  
Office, 2, Burgh-quay, Dublin, Dec. 5, 1850.

**MINING COMPANY OF WALES.—PROSPECTUSES,** containing REPORTS on the MINES and QUARRIES of the COMPANY, Terms and Conditions for its Government, &c., may be had of ST. PIERRE FOLLY, Secretary, to whom letters on the allotment of shares, and on the general business of the Company, are to be addressed.—Office, 24, Lincoln's Inn-fields, London.

**LEWIS MINES COMPANY.**—Notice is hereby given, that a DIVIDEND of TEN SHILLINGS per share will be PAYABLE here on Wednesday, the 18th inst., and succeeding Wednesdays, between the hours of Twelve and Three o'clock.—Salvador-house, Dec. 4, 1850.

**CHEMICAL ANALYSIS, &c.—ANALYSIS AND ASSAYS,** or INVESTIGATIONS OF ANY KIND, are UNDERTAKEN at the COLLEGE OF CHEMISTRY, LIVERPOOL.  
Professor—DR. SHERIDAN MURPHY, F.R.S.E.  
Hon. Assistant—MR. JOSEPH DANKSON, F.C.S.  
A complete list of Fees for Analysis, or Students Working in the Laboratory, may be obtained by writing to Dr. Murphy, College of Chemistry, Liverpool.



## Transactions of Scientific Bodies.

## MEETINGS DURING THE ENSUING WEEK.

|                |   |        |
|----------------|---|--------|
| TUESDAY.....   | Medical and Chirurgical—33, Berners-street.....           | 8 P.M. |
|                | Civil Engineers—25, Great George-street.....              | 8 P.M. |
|                | Zoological—11, Hanover-square.....                        | 8 P.M. |
|                | Synagogue—71, Mortimer-street, Cavendish-square.....      | 7 P.M. |
| WEDNESDAY..... | Society of Arts—Adelphi.....                              | 8 P.M. |
|                | Graphic—Thatched-house Tavern.....                        | 8 P.M. |
|                | Microscopical—21, Regent-street.....                      | 8 P.M. |
|                | Pharmaceutical—17, Bloomsbury-square.....                 | 8 P.M. |
|                | Ethnological—17, Saville-row.....                         | 8 P.M. |
|                | Literary Fund—73, Great Russell-street.....               | 8 P.M. |
| THURSDAY.....  | Royal Society—Somerset-house.....                         | 8 P.M. |
|                | Antiquaries—Somerset-house.....                           | 8 P.M. |
|                | Royal Society of Literature—4, St. Martin's-place.....    | 4 P.M. |
| FRIDAY.....    | Philosophical—London Library, 12, St. James's-square..... | 8 P.M. |
|                | Astronomical—Somerset-house.....                          | 8 P.M. |
| SATURDAY.....  | Medical—33, George-street, Hanover-square.....            | 8 P.M. |

## PROFESSOR TENNANT'S LECTURES ON MINERALOGY—ZEOLITIC AND VOLCANIC.—No. IX.

Prof. TENNANT, in opening his lecture, on Wednesday last, at King's College, made some remarks upon the general character of zeolitic minerals. When exposed to the action of the blow-pipe, more than three-fourths of their varieties had the peculiar property of expanding to double or treble the original mass; the greater portion also, when powdered and placed in heated nitric acid, formed a jelly. These minerals were found in amygdaloid rocks, or rocks which had almond-shaped cavities, in which they were formed. They occurred in the toadstones of Derbyshire, in the Isle of Arran, in the Faroe Islands, in Iceland, in many of the Hartz Mountains, in Central India, and in Nova Scotia. These minerals occupied the greater part of four cases at the British Museum, numbered 27, 28, 29, and 30.

The first upon the list of zeolitic minerals was *Stilbite*, which was chiefly in colour a beautiful white, having a peculiar pearly lustre, and occasionally red or brown. It occurred in well-defined crystals, compressed in the centre, and extending outwards like a sheaf of corn. There were many beautiful specimens in the British Museum showing this remarkable aggregation of crystals, as did several specimens he then handed round. In several of the specimens they were deposited on the green earth found in volcanic districts, and in distinctly volcanic rocks from Poonah. It occurred in exactly similar situations to agate, opal, and other varieties of chalcedony. It was composed chemically of the silicates of alumina and lime, and of water—there being of the latter often as much as six equivalents. Its specific gravity was low, being only 2; its hardness was 3-5 to 4.

*Heulandite* was so similar to stilbite, that for a long period the two were confounded with each other. Its appearance was, however, more glistening. *Analcime* was found in well-defined crystals, sometimes colourless, and at others grey and red; it was both transparent and opaque. Its primary form was a cube, with appearances of a cleavage parallel to the planes, and its fracture was conchoidal. It had a shining lustre, appearance, between pearly and vitreous. It became weakly electric by friction; hence its name from the Greek word signifying that quality. It dissolved in nitric acid, and, when reduced to powder, formed a jelly.

*Apophyllite*, or *fish-eye stone*, occurred in the form of a right square prism, and was of a white, light blue, and pink colour. Some very fine specimens of this beautiful mineral was to be found associated with poonahite in the British Museum, on which there were also several other substances, such as stilbite. This was one of the cases he had before remarked upon, in which there was nothing to guide the student, in order to distinguish between the different specimens.

*Breunnerite*, so called in honour of Sir David Brewster, was, he regretted to say, a very rare substance in the College museum. Its primary form was an oblique rectangular prism, and it occurred in small white or yellowish-coloured crystals, the cleavage of which was a nearly perfect parallel. It differed from heulandite, in having terribite of barytes and strontian in place of the terribite of lime, and also in containing rather more of water.

*Chabasie* was of a beautiful white colour, and was found lining volcanic rocks, which then had a peculiar metallic ring, from which it was commonly called clinkstone. It was found in rhombic crystals, transparent or translucent, and was hard enough to scratch glass. It was met with in large and very beautiful crystals in the amygdaloids of Faroe, Iceland, and Greenland, and was often associated with stilbite and green earth.

*Mesotype* was found in fibrous crystals, aggregated in a radiating or stellate form, the centre being often compact enough to yield a splintery fracture, while the surrounding part was soft, and apparently decomposing. Sometimes it was found in globular masses, losing all trace of the fibrous structure, and broke with the appearance of ivory.

*Harmatome* occurred in flat quadrangular prisms, terminated by rhombic planes replacing the solid angles of the prism. The crystals were often matted or crossed, longitudinally, in a manner just the reverse of the crystals of granate, which he had formerly described. The usual colour of harmatome was a whitish-grey; it was translucent, and had a somewhat pearly lustre. The strontian of Argyleshire produced the finest specimens of the simple crystals of harmatome; while the matted or cruciform variety were more frequently found in the metalliferous veins of the Hartz Mountains. George the Fourth presented to the British Museum a fine collection of minerals from the Hartz, which were formerly kept in one large case. That collection was now distributed through the other cases, but in it were the finest specimens of harmatome. It was often associated with argenteiferous galena.

*Lauzonite* was a singular mineral, inasmuch as it could not be long preserved, unless it were placed in water. When kept dry, it soon decomposed, and crumbled away. It was formerly called the *efflorescent scilite*, from this quality. It often contained no less than 16 per cent. of water when first brought from the rock.

*Natrolite* was a beautiful substance, occurring in radiated yellowish crystals. It was brought chiefly from Swabia, but it was plentiful in the neighbourhood of the Giant's Causeway.

*Phillipsite* occurred in white translucent or opaque crystals, with much of the appearance of harmatome; its cleavage, however, was less perfect. It was associated with *Gmelinite*, in the Island Magee, County Antrim, and in minute flesh-red coloured crystals, coating cavities of amygdaloid, in large translucent crystals, in the minor description of rock at the Giant's Causeway, in Ireland. This mineral was formerly held to be the same as harmatome.

*Prehnite* was generally of a pale greenish or yellowish colour, with a vitreous or pearly lustre, and somewhat translucent. It became electric by heat, and was soluble in diluted muriatic acid. It occurred fibrous, massive, and in crystals, which were often very closely aggregated. It was exceedingly tough, and he had that morning found himself unable to break the specimen he held in his hand with the light hammer he generally used. Its hardness, however, was only 6; its specific gravity was about 3. Beside it, in the British Museum, would be found some curious Chinese carvings; that people using it for ornamental purposes, and for the construction of some of their household gods. It was brought in considerable quantities from the Cape of Good Hope, and was very plentiful on the rock upon which stands Dumbarton Castle, and in some parts of England.

*Needlestone* occurred massive, and also in long slender prisms, terminating by quadrilateral pyramids. It derived its name from its appearance. *Thomsonite*, which was the last of this group, he would mention much resembled needlestone, but differed in cleavage and form.

The lecturer then proceeded to notice minerals which were purely volcanic. *Obsidian* was not found in distinct crystals, and its appearance was that of "slag" from a furnace. It was found plentifully in Iceland, the Liparo Islands, Ascension Island, Tenerife, Siberia, and Mexico. In some of these places it covered an immense surface, and was evidently the product of volcanic fusion. It had a conchoidal fracture like rock crystal, and broke occasionally with such sharp edges, that barbarous nations used it for the heads of their spears and axes. It was used in this way by the ancient Britons, who found it cast upon their shores, probably from Iceland. Their weapons and implements were, however, chiefly formed of flints. *Obsidian* was semi-transparent; and there might be frequently found in it fibrous veins like asbestos; but which was true pumice-stone. Indeed, in a strong fire, obsidian might be transformed into pumice, and pumice, with the addition of a little flux, into a substance very like obsidian.

*Pitchstone* was of a dead colour—either blue, green, yellow, brown, or black. It was found in the Isle of Arran, a place which, in passing, he strongly recommended to students as a most interesting locality.

He concluded by briefly noticing *pumice*, *pearlstone*, and *lucite*—the other substances in this family.

[The next lecture will treat of calcareous spar and limestone.]

## INSTITUTION OF CIVIL ENGINEERS.

Nov. 26 and Dec. 3.—WILLIAM CROFT, Esq. (president), in the chair.

The discussion on Mr. Struvé's paper, on "the Ventilation of Collieries, Theoretically and Practically Considered"—the particulars of which are given in another column—was continued throughout both evenings, to the exclusion of any other subject.

The discussion was adjourned until the next meeting, Tuesday, Dec. 10th, when the following paper was announced to be read:—"Description of the 'Royal Border Bridge,' built over the River Tweed, on the line of the York, Newcastle, and Berwick Railway," by Mr. G. B. Bruce, M.L.C.E.

## THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Nov. 30, was—No. of passengers, 18,397.—Amount of money, £23 14s. 9d.

## PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY.

The tenth annual general meeting of this company was held yesterday, at the offices of the company, Leadenhall-street.

Sir JOHN PIRIE, Bart. (the deputy-chairman), in the chair.

The meeting was numerously attended, and amongst those present we observed Sir John Pirie, Bart., A. Anderson, Esq., M.P., B. M. Wilcox, Esq., M.P., Dr. Beattie, of the Madras Service; Col. Underwood, Col. Knox, Col. Thomas Kearney, Capt. Thornton, N.N.; Han. J. G. Littleale, Capt. Hankey, Capt. Roxburgh, R.N.; Brodie Wilcox, jun., Esq.; Hon. Richard Moore, Gen. Briggs, Major Moore, J. C. Morris, Esq.; Col. Sandys, Malcolm Lawin, Esq.; W. F. Desails, Esq.; James Hartley, Esq.; Col. Tullock, C.B.; Capt. Engleade, James Allen, Esq., &c.

The SECRETARY, after the usual preliminaries, read the following

DIRECTOR'S REPORT.

The directors have now the pleasure to present to you their report of the state of the company's affairs, and of the proceedings for the twelve months ending on the 30th of September last, being the tenth year of the company's establishment.

In conformity with the resolution passed at the annual meeting of proprietors, held on the 13th of December, 1848, a statement of the accounts, duly audited, with supplemental explanatory documents, has been laid on the board-room table during the last seven days, for the inspection of such proprietors as might desire to examine the same. It exhibits the following results:—

|  |              |
|--|--------------|
| A balance of net profit for the year ending 30th September, 1849, after providing out of the earnings the usual reserves for wear and tear, insurance against sea-risk and depreciation, also for contingent expenses in replacing the <i>Hindustan</i> on her station in India, and bringing the <i>Benkash</i> from India for repairs, as well as providing for the expenses of sending the <i>Erin</i> , <i>Pacha</i> , and <i>Tagus</i> to India and China, of £26,500 1 8 |              |
| To which is added the balance of undivided profits from the previous year, as per statement presented 6th December, 1849   | 6,618 17 1   |
| Total  | £33,118 18 6 |
| Out of which the directors have appropriated, in augmentation of the Guarantee Insurance Fund for meeting extraordinary casualties   | 7,500 0 0    |
| Leaving disposable for dividend, &c.   | £25,618 18 6 |
| Deducting from which the half-year's dividend to 31st March last, paid   | 40,000 0 0   |
| There remains  | £15,618 18 6 |
| From which, deducting the half-year's dividend of 4 per cent., now about to be recommended, estimated to amount to   | 40,000 0 0   |
| There will remain to meet contingencies, and to be carried to next year's account  | £ 5,618 18 6 |

## THE GUARANTEE INSURANCE FUND.

This fund, it will be recollected, was reported, at the last annual meeting, to amount to £150,000, which the directors considered adequate to meet any extraordinary casualties in the transit of the company's property. Two new ships, at a cost of about £5,000, having been since added to it, and a considerable extension of the company's operations being about to be effected, as will be presently alluded to, the directors consider it to be desirable that a proportionate augmentation of this fund should be made. They have, therefore, availed themselves of the fortunate absence of any serious casualties from sea risk to the company's fleet during the last year, to augment this fund to £150,000, by the following means:—

|   |              |
|---|--------------|
| Out of the ordinary earnings of the year they have appropriated to it                   | £ 7,500 0 0  |
| Out of the annual premium for the ordinary current sea risks of the year                | 25,500 0 0   |
| Total   | £33,000 0 0  |
| To which, adding the amount of it, as it stood at the close of the financial year, 1849 | 150,000 0 0  |
| The present amount of the fund will be  | £183,000 0 0 |

This arrangement will, the directors consider, serve to guarantee sufficiently from all extraordinary casualties the integrity of the company's property; while it will leave them still the means of making a payment of 10 per cent. to the proprietors, on account of their risk as underwriters, and which will be paid early in the ensuing year to each proprietor, on the number of shares for which he may be entitled to the dividend now about to be declared.

## TENDERS TO GOVERNMENT FOR ESTABLISHING A STEAM COMMUNICATION WITH AUSTRALIA, IN CONNECTION WITH OTHER NEW LINES IN THE EASTERN SEAS, &amp;c.

The particulars of the proposal made to the Government for the above object, on the 23d January last, in consequence of the public advertisement issued in the month of Nov. 1849, were laid before you in the last half-yearly report. Since then, that proposal and the proceedings of the Government in respect of it have, as you are aware, become the subject much of discussion, both in Parliament and by the public press. It can hardly create much surprise, that such a proposal should have encountered a determined opposition, in quarters and among parties with whose interests and views it might be considered to interfere, and that in consequence much misrepresentation should have gone forth upon a subject of so much public importance. The discussion, however, both in and out of Parliament, have led to the satisfactory result of eliciting such facts relative to this question, as can hardly fail to convince every disinterested or impartial mind, that the proposal made by your directors combines greater public advantages than it has fallen to the lot of any other private enterprise to offer, and that its intrinsic merits are such as can scarcely fail to ensure its being adopted. Two of Her Majesty's Cabinet Ministers, whose departments are chiefly concerned with it—the Chancellor of the Exchequer, and the Secretary of State for the Colonies—have publicly recorded their opinion that the tender of this company is "a most advantageous offer for the public," and that they are "most anxious to adopt it." After such a declaration, and looking to the urgent demands of the Australian colonies for the prompt establishment of a steam communication with the mother country, together with the expressed willingness of the directors at once to carry out that communication, and to postpone that part of their plan which has occasioned the difficulty with the East India Company, your directors cannot believe that any difficulties of an ordinary nature will be permitted to delay much longer a measure recognized by such high authority to be so advantageous for the public interests. As far, however, as the pecuniary interest of this company is concerned, the directors feel that the acceptance or refusal of their offer to establish a steam communication with Australia, via Singapore, is of comparatively little importance. But with the desire to meet the so long and anxiously expressed wishes of these important colonies, they considered it right to remove all the advantages which the present position of the company affords, in order to remove the financial difficulty which they understood to be the chief obstacle, on the part of the Government, to the effecting of this desirable measure. In submitting the plan and proposal, the directors conceive they have removed that difficulty. But they consider that the terms proposed present more immediate advantage to the public than to the company, and that it would be equally, if not more conducive to your interests, if some other parties, possessing the means of ensuring its efficient development, could be found to undertake the enterprise; because such an arrangement could not fail of being beneficial to this company, by increasing the traffic on its established lines, while it would be exempted from the risk of loss, which almost invariably attends the opening of a new line of ocean steam communication.

## EXTENSION OF THE COMPANY'S OPERATIONS, INDEPENDENTLY OF THE ADOPTION OF THE PROPOSAL TO GOVERNMENT.

A direct line of steam communication between Bengal, Poonah, Singapore, and China, having been for some time past urgently desired by the merchants and others at Calcutta and in the latter place, the directors have determined to open experimentally such a communication. With this view they have ordered the *Lady Mary Wood*, (which vessel they have been compelled, as hereinafter explained, to withdraw from the Hong Kong and Shanghai service), to proceed to Calcutta, to open a communication between that port, Poonah, Singapore, and China. They are also fitting out for this service the *Erin*, of 550 tons, and 280 horse-power, which will proceed from Southampton, in the course of a month, for Calcutta, and will be followed by another suitable vessel for the same destination and service. The directors consider that this branch service, worked as a merely commercial and passenger line, in such manner and at such seasons as the traffic may require, and as may be found most advantageous to the company, unfettered by any mail contract, will prove remunerative. Its conversion into a regular postal communication may subsequently be effected, as part of the proposal now before the Government, should that proposal be definitively adopted.

## INCREASE OF THE COMPANY'S FLEET.

The two new ships mentioned in last year's report as in progress of construction at Glasgow, are now nearly complete for sea. They have been named the *Singapore* and *Ganges*, are of 1200 tons, and 500 horse-power each, and in speed, and all other useful qualifications, are estimated, by competent judges, not to be inferior to any ocean steam vessels now afloat. The *Singapore* is on the point of proceeding to Liverpool, whence she will take a cargo and passengers for Malta and Constantinople, and will shortly be followed, for the same destination, by the *Ganges*.

In order further to maintain the company's fleet in full efficiency, and to meet the increasing requirements of its trade, as well as to avail themselves of all the most recent improvements in steam navigation, the directors have determined to contract for the construction of the following vessels:—viz., two steam vessels, of 800 horse-power, and about 2000 tons each, for the Southampton and Alexandria service; one vessel, of about 800 tons and 300 horse-power, for the home service; two vessels, of 1100 tons each with screw-propellers and engines of 250 horse-power each, intended for cargo vessels.

## INCREASE OF THE COMPANY'S CAPITAL.

Looking to the outlay which will be required for the construction of the five additional vessels above-mentioned—to the expediency of maintaining the company in a perfectly independent position in respect to its finances, and the probability of a still further and considerable addition to its fleet being required, in the event of the plan and proposal which they may carry into effect the resolution of the general meeting, held 30th of May last, for increasing the capital by the creation and issue of 10,000 shares, of 50l. each, to represent the half million of capital remaining to be called up. They accordingly propose, as formerly intimated, to allot the new shares, at par, to the holders of the present shares, in the proportion of one new share to every two of the present shares, for which proprietors may stand registered in the company's books on 31st of December instant. A deposit of 5l. per share to be paid into the company's bankers, on producing a receipt for which the shares will be duly registered, and a certificate given to the holder. The deposits to be divided on and after the 1st April, 1851; and all shares not taken up by the 31st March next (except by shareholders resident in India, to whom a further time will be allowed), will be considered as declined, and will be appropriated to the general benefit of the company. As no half shares can be allotted, parties holding only one, or an odd number of old shares, if they cannot otherwise arrange, may, by giving a written order to the secretary, assign their interest in half a new share to some other shareholder having an odd number of old shares, who will upon such order be registered for the share so assigned.

## TRANSIT THROUGH EGYPT.

The directors have much satisfaction in being able to inform you, that his Highness, the Pacha of Egypt, continues to manifest the same solicitude for improving the arrangements for the transit of passengers and goods to and from India, &c., through that country, for which he has been distinguished since his accession to his present high office. His Highness has also given additional proofs of his friendly feelings towards the company, and of his entire confidence in the directors—having placed the construction of a very large steam frigate, and some smaller vessels for the Nile service, under their superintendence. The representations of the company's agent in Egypt, in respect to any required improvements in the transit arrangements, continue also to meet prompt attention from the Pacha's ministers and officers.

## WITHDRAWAL OF THE "LADY MARY WOOD" FROM THE NORTHERN PORTS OF THE CHINA STATION.

The directors informed you, in their last half-yearly report, that they had placed the company's steam-vessel, the *Lady Mary Wood*, to ply on the north coast of China, between Hong Kong and Shanghai. The earnings of this vessel, up to the month of July last, proved remunerative to the company, and her services on this line were highly appreciated by most of the merchants and other residents in China, as a means of facilitating commercial intercourse, as a check to piracy, and as a postal communication. In regard to the latter, memorials, numerous and influentially signed, have recently been forwarded from China, and also from Bombay, praying Her Majesty's Government to enter into an arrangement with this company to secure a regular and permanent steam postal communication on that line. A circumstance, however, occurred in June last, at Shanghai, which has compelled the directors to order this vessel to be withdrawn from that station. It appears that, in taking up this line of service, the steamer became placed in competition with a certain class of British sailing vessels trading on the same coast. These sailing vessels are in the habit of discharging and receiving their cargoes at a place called Woosung, which is 15 miles distant, by water, from Shanghai, and is considered beyond the limits of that port, and consequently out of the jurisdiction of the British Consul. Vessels using this place are, therefore, exempt from port charges; and, having to deal only with the Chinese authorities, merchants and others, shipping goods, obtain certain privileges and exemptions, it appears, in respect of duties, which they cannot obtain at Shanghai. The company's agents in China had adopted the same arrangements for the *Lady Mary Wood*, in respect to her using the anchorage at Woosung for receiving cargo, &c., as were practised by her competitors, the sailing vessels. In the month of June last, the Consul, at Shanghai, on the request of an extensive mercantile firm in China, largely interested in the ownership of these sailing vessels, sent a large quantity of silk from Shanghai on board the *Lady Mary Wood*, at Woosung, upon which it appeared the Chinese export duty had not been paid. The transaction was conducted in so open a manner, that the Chinese Custom House authorities felt themselves obliged, as it appears, to claim the interference of the British Consul at Shanghai in the matter, who fined the shipper £200; and on the return of the *Lady Mary Wood* to the port, the master was arrested, the Consul, £500, for an alleged breach of the port regulations, and was ordered by the Consul not to use the anchorage of Woosung in future, but to discharge and load at Shanghai. This compulsory arrangement not only subjected the vessel to a heavy amount of port charges, but deprived merchants, &c., of those privileges which they are said to obtain from the Chinese authorities by shipping goods on board vessels at Woosung. Meanwhile, the sailing vessels, her competitors, continue to discharge and load at Woosung, without impediment. The steamer was, consequently, besides being subjected to heavy port charges, no longer made use of for the conveyance of silk and other valuable articles, except to an inconsiderable extent; and her earnings, therefore, becoming insufficient to cover her expenses, the directors have ordered her to be withdrawn from that service. The directors are about to make a representation of the circumstances to Her Majesty's Secretary of State for Foreign Affairs, and hope some such equitable regulation in respect thereof may be made, as will enable them to resume a line of service which has been so much appreciated by the great majority of British residents in India and China.

## APPOINTMENT OF AN AUDITOR.

It is with deep regret that the directors have to report the decease of Jameson Hunter, Esq., one of the auditors of the company. At a special meeting of proprietors, held on the 12th ult., for the purpose of electing a qualified proprietor, to fill the vacant office, Ralston Currie, Esq., M.P., was unanimously elected to it. The directors feel assured that the well-known position of this gentleman in commercial life will ensure the approbation of the shareholders at large of the choice made by the special meeting. The directors are now completing the first 10 years of the company's establishment, the directors have been permitted to offer one or two observations on its past history, its present position, and its future prospects. If its progress up to the present time has been marked by a degree of prosperity which few enterprises of a similar nature have been fortunate enough to experience, that prosperity, they venture to assert, has not proceeded so much from adventitious circumstances, as from the active and judicious exertions which have been successfully made to render it instrumental in promoting the public interests. It has not been entrusted with any of the public services in which it is now employed, until the first instance, by its own exertions, in a position to undertake them on more favourable terms for the public than could be otherwise obtained; and it has executed those services with efficiency—to the due fulfilment of its contracts, and to the satisfaction of the Government. It has now attained to a magnitude considerably surpassing that of any other private steam navigation enterprise. Means have been provided for maintaining the integrity of its property, and the position which it has now acquired, enables it to execute any future services which it may be called upon to undertake, for the benefit of the public, on more advantageous terms than any other enterprise can offer; and, on these solid grounds, the directors consider that you may look with confidence to its future progress and continued success.

The directors now recommend that the usual dividend of 4 per cent., for the half-year ending on the 30th of September last, be declared, and be made payable on and after the 23d instant.

The report was received with applause.

The CHAIRMAN stated that the dividend of 4 per cent. was to be made without any deduction for income tax.

General BRIGGS, in moving the adoption of the report, said it was a most satisfactory one. The accounts were satisfactory, but not given so fully as might be wished. He had carefully examined the accounts some days before the meeting, and the explanations which he had received from the managing directors were most satisfactory. He was glad to perceive that they were about to add 30,000l. to their insurance fund, which he thought a most prudent arrangement. Fortunately they had had few casualties during the past year. He found they had cash assets in Exchequer Bills, and other securities, to the amount of 140,000l., and good bills to the extent of 183,000l., besides other property. The dividends, although most satisfactory, were not too much, when it was considered that they ran a great risk. There was a question mooted in the report with respect to the Australian service, but he would not then discuss it, but would do so afterwards. He begged to move the adoption of the report.

Dr. BEATTIE seconded the motion. The total income for the year was larger than during the preceding year; and although it would admit a larger dividend than 8 per cent., still he was quite satisfied with it, and with the general management of the directors, who had done everything they could. The proceeding in China with respect to the *Lady Mary Wood* appeared to him to be most improper and unwarrantable. Speed was an object of great importance to traders, and the vessels gave, in that respect, general satisfaction. He was happy to be able to corroborate the report of the directors with respect to the transit from Alexandria to Suez. They owed their success to a management no less able than upright.

The resolution was then put, and carried unanimously.

Colonel UNDERWOOD proposed that the dividend be payable on and after the 23d inst. It was unnecessary for him to occupy their time, and he would, therefore, simply propose the resolution.—The resolution, after being seconded by Mr. LEWIS, was put, and carried *sem. con.*

General BRIGGS, in reference to the Australian postal communication, wished to know the nature of the difficulties alluded to in the report, in carrying out that project. It did not appear, from the interview of the deputation with the Government on Thursday, that they were disposed to afford much encouragement to the plan.

The CHAIRMAN stated that the offer which had been made to the Government by the company, with respect to the communication with Australia, was still unanswered and unaccepted.

Mr. ANDERSON said, the financial difficulty in the way was, that the Government thought that to carry out a steam communication with Australia alone would be too expensive, and, therefore, it was proposed to extend the line of communication, so as to make the traffic remunerative. The directors of this company proposed at once to carry out the Australian communication without reference to the communication with Suez, until the existing arrangement should be terminated, which would be in 1851. They had been accused of having a monopoly of the trade with China. That he denied; but even if it were so, he thought it was, at all events, clear that the East India Company had a monopoly of the traffic between Bombay and Suez. Their only monopoly was to give greater facilities to the public than any other company.

On the motion of Dr. CONQUEST, seconded by Mr. PERRINS, a vote of thanks to the chairman and directors was unanimously agreed to.

The CHAIRMAN returned thanks for himself and his colleagues; and said nothing would give them greater pleasure than to do all in their power to promote the interests of the company.—The meeting then separated.

## STEAM FLEET OF THE PENINSULAR AND ORIENTAL NAVIGATION COMPANY.

| SUEZ AND CALCUTTA.          |       |           |  | CONSTANTINOPLE AND BLACK SEA. |        |           |  |
|-----------------------------|-------|-----------|--|-------------------------------|--------|-----------|--|
| Ships.                      | Tons. | H.-power. |  | Ships.                        | Tons.  | H.-power. |  |
| <i>Rivindan</i>             | 1800  | 520       |  | <i>Sultan</i>                 | 1100   | 400       |  |
| <i>Bontek</i>               | 1800  | 520       |  | <i>Euzine</i>                 | 1100   | 400       |  |
| <i>Precursor</i>            | 1600  | 500       |  | <i>Tagus</i>                  | 900    | 280       |  |
| <i>Haddington</i>           | 1500  | 500       |  | <i>Erin</i>                   | 550    | 280       |  |
| <i>Orizaba</i>              | 1600  | 500       |  |                               |        |           |  |
| BOMBAY AND CHINA.           |       |           |  | PENINSULAR.                   |        |           |  |
| <i>Pekin</i>                | 1150  | 430       |  | <i>Monroe</i>                 | 650    | 240       |  |
| <i>Achilles</i>             | 1000  | 420       |  | <i>Iberia</i>                 | 600    | 220       |  |
| <i>Malta</i>                | 1225  | 450       |  | <i>Pacha</i>                  | 600    | 210       |  |
| <i>Brassay</i>              | 800   | 280       |  | <i>Jupiter</i>                | 600    | 250       |  |
|                             |       |           |  | <i>Madrid</i>                 | 600    | 160       |  |
| HONG KONG AND SHANGHAI.     |       |           |  | NEW SERVICE.                  |        |           |  |
| <i>Lady Mary Wood</i>       | 650   | 260       |  | <i>Singapore</i>              | 1200   | 500       |  |
|                             |       |           |  | <i>Ganges</i>                 | 1200   | 500       |  |
| CANTON LOCAL.               |       |           |  | Total                         | 27,155 | 9310      |  |
| <i>Canton</i>               | 400   | 150       |  |                               |        |           |  |
| SOUTHAMPTON AND ALEXANDRIA. |       |           |  |                               |        |           |  |
| <i>India</i>                | 1400  | 450       |  |                               |        |           |  |
| <i>Pipon</i>                | 1500  | 450       |  |                               |        |           |  |
| <i>Pottinger</i>            | 1400  | 450       |  |                               |        |           |  |

## NEW STEAM MARINE BILL.—There are at the present time 1110 steam-vessels

in the mercantile navy of Great Britain, and upwards of 3000 accidents have occurred betwixt steamers and sailing vessels within the last three years. The attention of Government having been drawn to the numerous accidents, Capt. Denham, R.N., F.R.S., was appointed to proceed to the various ports to which the vessels belonged, and in many instances to the nearest places where the accidents occurred, to make inquiry into their causes, and succeeded in obtaining much valuable information on the subject. The gallant officer is now engaged with the legal authorities in drawing up a Bill, to be brought before Parliament next session, for the better regulation of the steam marine navy, and to compel those in charge of them to adopt greater precautionary measures than they do at present, the Acts of Parliament previously passed being in so many instances inapplicable, and not by any means imperative enough, or sufficient to award punishment for neglect of the regulations. It is feared, however, that the new Bill will not be made perfect until all sailing vessels, as well as steamers, are compelled to show lights at night.—*Daily News*.



## KINGSETT AND BEDFORD UNITED MINING COMPANY.

We are glad to perceive that the affairs of this mine, noticed in two former Numbers of our Journal, have assumed a more pacific aspect since our publication of last week. It is always to be lamented when accusations are bandied about, by which a want of confidence is induced in those to whom the interests of the shareholders are entrusted, since a mine, any more than a house, divided against itself, cannot be expected to possess the elements of stability and profit. In this case the opposing parties, fortunately for themselves, have perceived the danger to which the interests of the mine were exposed, and by a timely exercise of a little mutual forbearance, have averted the peril which threatened them. The advertisement which appears in another column is honourable to the candour and good feeling by which those who previously had figured in the character of opponents to Mr. Vatcher, the pursuer of the mine, are now actuated, since it involves an admission of having acted under misapprehension, which further investigation has served to remove. This, indeed, is a result which might be looked for from the detailed report of the proceedings at the meeting of Nov. 25, at which, it must be confessed, the charges brought against the pursuer signally broke down, in a fashion that must have astonished those who had imagined, no doubt in good faith, that they were fully capable of proof. Even the gallant chairman, who quitted the meeting so abruptly, must have been not a little edified by the publication of what took place afterwards. Nothing now remains, we believe, to complete the work so happily begun, but the avoidance of all jealous suspicions on the one side, and concealments or reservations on the other, when, we doubt not, a good understanding will be fully established.

It cannot be wondered, however, that Mr. Vatcher, the party who has had to bear the brunt of sundry unfounded accusations, should feel somewhat sore after what has recently taken place. It is no light thing that a man in his position with respect to the mine, should be suspected of unworthy manoeuvring for his own advantage, or supposed capable of misrepresentation to serve a private purpose; and charged, moreover, with falsifying the terms of a resolution, and making a discreditable bargain for the sale of shares. Happily for his personal reputation, there seems to be no imputation which is not altogether proved to have originated in error—no accusation that has not crumbled away at the touch of investigation. Obligated as we were in justice to notice what was alleged against him, we feel the greater pleasure at perceiving the disposition which exists to render him justice, and admit the groundlessness of the suspicions lately entertained. It is not enough, however, that he be rescued from suspicion, since there is good reason to believe that Mr. Vatcher has devoted no common zeal and energy to the mine, in which his personal interest is certainly as large, or larger, than any other shareholder. It is not to be supposed but that he must necessarily desire the prosperity of the mine, and be anxious likewise to enforce a system of economy in management, by which he will profit more than most others. With the better feeling now prevailing, Mr. Vatcher's good sense will, doubtless, teach him to forget as soon as possible that he has been an injured man, for he may be assured that a disposition to cast aside old grievances, and proceed steadily in the measures necessary for developing the resources of the mine, will do more than anything else to remove erroneous impressions, and win the confidence of the body of shareholders. Hitherto he has forborne all recrimination, and he cannot do better than persevere in that laudable policy. He has quietly appealed to facts and results, and they have been wholly in his favour, and with this advantage he will act wisely to be satisfied; and having ourselves given substantially the evidence on either side, we gladly record the result.

As regards the shareholders, they, too, have a duty to perform as well as their pursuer, which is to repress an over anxiety for a dividend, before any regular plan of operations is carried out. Instead of cherishing the embers of bad feeling and personal hostility, of which there have been far too much already, they will do much better in exercising the virtue of patience until the expectations of success, warranted by the opinion of competent judges, have had time to be realised. One little fact brought forward at the meeting of the 25th of Nov. ought to have a soothing effect, even on those who have fancied themselves most aggrieved—viz.: the deliberate opinion of Capt. Seymour, in his brief report read at the meeting, that "the mine will pay cost, and a profit to the adventurers, after the expiration of two months, if worked properly." With this opinion in their favour, they may cheerfully await the issue of further operations, more especially as the statement of accounts rendered by the pursuer clearly shows that they are not in half so deplorable a condition as, from their late dissensions, might be imagined. On the contrary, it appears that their prospects are excellent, and to all appearance capable of speedy realisation, if they are not marred by their own folly, and a want of self control which, under the circumstances, would be unpardonable.

## IMPORTANT MEETING OF THE COAL TRADE.

A most influential meeting of the merchants and coalowners of Newcastle-on-Tyne, and surrounding districts, was held on Tuesday at the Guildhall in that town, to consider the great inequality between the duty upon Belgian and upon English coal, as levied by the French Government. The Mayor of Newcastle, W. ARMSTRONG, Esq., was in the chair, and amongst the gentlemen present we observed, Matthew Bell, Esq., M.P., W. Hutt, Esq., M.P., the Hon. H. T. Liddell, Hugh Taylor, Esq., chairman of the coal trade, and agent for the Duke of Northumberland, N. Hindbrough, Esq., agent for the Marquis of Londonderry's collieries, H. Morton, Esq., agent for the Earl of Durham's collieries, Alderman Lamb, Alderman Carr, Nicholas Wood, Esq., &c. A letter was read from the Marquis of Londonderry, apologising for his absence from indisposition, and expressing his opinion that the British Government should be requested to apply to the Government of France for an equalisation of the duties which the meeting had been called to consider.—The Hon. Mr. Liddell moved the first resolution, and read a statement showing that Belgian coals were admitted into France by land at a duty one-fifth less than the duty charged upon all sea-borne coals. He attributed the origin of this difference to the policy pursued by the late King of the French, Louis Philippe, which frequently had for its object the aggrandisement of his own family rather than the promotion of the interests of France.—Robert Plummer, Esq., next addressed the meeting, and read a statement, from which it appeared that the quantity of coals brought into France from Belgium had increased from 781,189 tons in 1837 to 1,350,206 in 1849; the quantity exported from England in 1837 was 259,273 tons, and in 1849 was 611,501 tons. Of Belgian coke, the quantity sent to France in 1837 was 71 tons, and in 1848, 102,325; whilst of English coke the quantity in 1837 was 56 tons, and in 1848, 195 tons.—Mr. Nicholas Wood said that in the vicinity of his residence six large coal heaps were continually burning, and he believed the coals thus burnt were very much wanted across the channel. The coalowner would be satisfied with one-fourth of the duty now chargeable upon those coals; he would be satisfied with 2 fr. per ton.—Mr. Bell, M.P., said he had brought the subject before Lord Palmerston, but his lordship had coolly replied that he would take the subject into his serious consideration.—Mr. Hutt warmly vindicated the Minister for Foreign Affairs, from any imputation of indifference, and stated his belief that the subject had only to be brought before his lordship in all its bearings to meet with his prompt attention. He had reason to believe there was a strong party in France in favour of an equalisation of the duties.—After an animated discussion, a memorial to Lord Palmerston was unanimously agreed to, calling upon his lordship to take care that in any negotiations for a commercial treaty with France, some arrangement should be made for the removal of the inequality of duty which now operates so injuriously upon the export of coals from this country into France. Resolutions were also agreed to, requesting the Members for Newcastle and the district to press this question on the consideration of her Majesty's Government and the Legislature.

**EXPERIMENTS IN STEAM NAVIGATION.**—The *Rosamond* steam-sloop is again in an advanced state, and will soon be ready for sea. The Board of Admiralty have issued an order to make a series of experiments with her four boilers and engines of 286-horse power. The experiments commenced on Wednesday morning, under the superintendence of Mr. John Trickett, assistant to the chief engineer at the factory at Woolwich Dockyard, and will be concluded in the course of next week. These experiments will furnish correct data of the amount of evaporation of water with the whole four boilers, or when only working two boilers. They will also afford a test as to the best description of coals for generating steam—each kind of coals being weighed before being put into the furnaces. The result of the trial is looked forward to with great interest, as every preparation has been made to make it a fair criterion.

**THE GREAT EXHIBITION.—PATENT LAW REFORM.**—The *Gazette* of Tuesday last gives the order issued by the Board of Trade, pursuant to the Provisional Registration Designs' Act (13 and 14 Vic., cap. 104) authorising the exhibition of provisionally registered designs in the building for the Great Exhibition in Hyde Park, thus providing that anything exhibited, which has been previously registered, shall be protected according to the terms of the Act.

**VALUABLE DISCOVERY.**—We learn that an additional feature of interest falls to be added to the geology of our country, already rich in variety, in the recent discovery of a vein of the sulphate of barytes, the *terra ponderosa* of the earlier mineralogists, in the conglomerate of Gamrie. The vein is of considerable dimensions, and, by specimens which have been put into the hands of chemists, proves to be rich in that peculiar earth. It is known that this earth is very frequently associated with several of the more valuable ores. We believe the merit of ascertaining this fact in connexion with our locality is due to the Rev. Mr. Harris, Gamrie. We also understand that the same gentleman has pointed out several veins of the peroxide of manganese, in the same formation, which, so far as it appears, have hitherto escaped observation. Some of these are rather large, and the mineral, as determined by chemical analysis, is abundant in the metal. It is entirely free of iron, which is rather unusual.—*Banffshire Journal*.

## MINING IN SOUTH AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

(Concluded from last week's Mining Journal.)

The result of the land sale created not a little consternation among the banks; the Government have for some time past required that all land shall be paid for in gold, which, instead of being deposited in the three banks, as it is done in Sydney and Melbourne, is here looked up in the "Treasury." The immediate consequence of the withdrawal of 50,000*l.* in gold from the banks would carry with it a curtailment of the discount accommodation afforded to the general customers of the banks of 3*l.* for every 1*l.* withdrawn, or in one sum of 90,000*l.* A severe monetary crisis must have been the inevitable result; and the managers of the three banks lost no time in soliciting an interview with Sir Henry Young, to make known to him the danger which would accrue to the business transactions of the place should he insist upon taking this gold out of circulation. The practice of the Government has been to make their remittances to England for emigration purposes (to which the proceeds of land sales are in great part applied), through the medium of the Colonial Commissariat Establishment at Hobart Town and Sydney, taking the Commissariat drafts on the Lords of the Treasury at par, in exchange for the gold; and it has, I believe, never happened that it was necessary to ship the gold to Hobart Town or Sydney, as the local banks generally found it convenient to take the gold in exchange for drafts at sight on their branches in the two places above-named, where the proceeds of these drafts were again exchanged for the Commissariat drafts. Just now, however, the circumstances are altered. All the colonial banks want to draw on London, where, from the late rise in wool, a large balance remains in favour of the Australian colonies, which the London head establishment wishes the colonial establishments to draw against; and, owing to this, the Adelaide banks could, of course, not draw on Sydney or Hobart Town, except at a great disadvantage, whilst it would be a material advantage, particularly to the Bank of Australasia, to receive the gold from the Government here, and to give drafts on the London office for the amount.

Here, then, lay the dilemma: the Government have such absurd notions on money matters, that it took a great deal of persuasion to move them from the old "humdrum" course of preferring Commissariat paper to the drafts offered in this case, on equally advantageous terms—namely, at par—by the Bank of Australasia on London. To cut a long story short, the Governor was luckily in a melting humour, and he has averted an undoubted and most disastrous monetary crisis, by consenting to take the draft at sight of the Bank of Australasia on their London head establishment for 50,000*l.* at par.

It is to be hoped that the very absurd and mischievous practice of locking up the gold in the Treasury will shortly be discontinued, for it is a positive insult to the three great banking establishments (Bank of Australasia, of South Australia, and Union Bank of Australia), with their capital of some millions, to doubt the propriety of entrusting a few paltry tens of thousands into their custody as a deposit.

I trust you will not consider this long digression on banking affairs as unimportant; our mining operations are too intimately connected with the state of the money market, and the legitimate accommodation derived from the banking establishments, not to make it necessary to touch upon all causes which are apt to derange that indispensable auxiliary to mining industry; and it would be a fit subject for the London directors of these establishments to urge upon the immediate and serious attention of Earl Grey; for, although the Governor here is blamed for hoarding up the gold in the Treasury, instead of depositing it with the banks, payable by the latter on demand, it is well understood that he is only acting upon orders from "Mr. Mothercountry."

The large sum obtained from this sale will bring out 2000 emigrants—relieving England of her superabundant children, and adding so many additional consumers of British manufactures to this population; and still people in England cry out—"What good are the colonies?"

I need not say anything to-day about the operations at the Burra Mine, excepting that the last six weeks "take" produced 5000 tons of ore, from 10 per cent. up to 45 per cent. produce. The works are carried on with the greatest activity; the crushing machine has arrived, and will soon be at work, when a number of pitches will be opened on ory ground in the surface levels, which have hitherto not been touched, owing to the expense of "bucking" the stuff down. The large chimney, and the second row of furnaces at Messrs. Schneider and Co.'s works, at Kooronga (the name of the Burra township), are fast approaching completion. I believe I mentioned in my last that one ship, bound to Singapore, had last month taken 220 tons of fine copper as cargo; another ship took upwards of 100 tons, and every ship to Calcutta, Bombay, Madras, and China, takes a quantity. The ships which bring out emigrants go to India from here—thus a new branch of trade has been established on a large scale, which, in a few years' time, will be of great importance. Therefore, "look out, ye smelters of Swansea!" the India copper trade is fast "slipping through your fingers." Since I last wrote to you I have paid a visit to the Reedy Creek Mine (Tungkilli); the road passes by the Gold Company's land, on the Onkaparinga. It is true, the gravel contains gold, but I do not believe as much has yet been collected as would fill a saltspoon. The proprietors, of course, live in hopes that they will find no end of gold "BY-AND-BYE," and when that "devoutly-to-be-wished-for" period arrives, I will send you full particulars. Much better samples of gold have been procured from the upper branches of the Torrens River; and it is probable that as much as can be collected will be sent to the Exhibition of all Nations, to be held in London next year. As to the Tungkilli Mine, belonging, as it does, to an English proprietary, the best information is, no doubt, regularly and often transmitted by Major Campbell to the board at home. The engine is now at work, and answers admirably; there is plenty of ore in sight, but no dividends; this may be unpleasant news to the shareholders, but it is, nevertheless, true. The ore of the large lode is a yellow pyrite, mixed with mudic, and disseminated through the rock, so that the process of stamping has to be resorted to, to be able to wash out the matrix; and I do not believe that the ore in the washed and dressed state will produce more than 15 per cent. The London board did a very wise thing in sending out Major Campbell as superintendent; the local committee, had they retained the control in their own hands, would have worked out the eyes of the mine, in order to release their free shares, which are not saleable until 5 per cent. dividend has been paid to the shareholders out of the profits. When Major Campbell arrived, he found the system flourishing, and the mining captain was not permitted, at that time, to carry on works of an indispensable nature to the permanent character of the mine, because it involved a considerable outlay without yielding ore, and would, as a consequence, retard the moment indefinitely when the free shares could be sold. It was also scarcely competent to the local board (to use very mild language) to execute a lease for a number of years, to one of themselves, of the whole of the surface pasturage of the 20,000 acres RENT FREE! when many people would willingly pay 200*l.* a year and more for the right of it. The present management of Captain Phillips, as mining captain, and Major Campbell, as manager of the finances, is all that can be wished for by the shareholders.

The main shaft of the Kapunda engine broke the other day, and in 48 hours the water had risen to the height of 6 or 7 fathoms from surface; it is said to have done a good deal of damage below, but the extent of it is not allowed to transpire. This engine, you will recollect, came out as a second-hand one, and the "penny wise and pound foolish" system of using cheap articles for such important purposes, is very prettily demonstrated. She has constantly something the matter with her; and although she is now mended, and is again forking out the water to the bottom, there is no trusting her to do the work required of her. A couple of regular furnaces are kept at work here reducing the poor ores. The captain of the mine died the other day—this is the second who has died there.

Wheal Margaret, the silver-lead mine opened on the Paringa property, is doing very well, and has declared a dividend of 20 per cent. on the paid-up capital. This is the first and only mine in the colony which has paid a profit as yet, excepting always the Burra. Wheal Friendship—a sett taken also from the Paringa property, of which I reported favourably in my last—continues to confirm the views I expressed as to its prospects: a good deal of copper ore is being raised, and shares are at a good premium. The Strathalbyn district, further south, is also showing more mineral lodes; another mine having been lately opened there, called the Glenalbyn, produced very kindly stones of copper. The revenue of the quarter, ending 1st July, produced 69,368*l.* 5*s.* 10*d.*, or rather better than a quarter of a million sterling per annum.

Adelaide, July 26.

P.S.—I forgot to mention, that there has been a tremendous panic in the Royal Mining Company's shares; the sections which fell to their lot, after the Burra Company has taken their first choice, did not show well on opening the ground, and a regular rush was made by speculators to get rid of their shares as fast as possible. Some succeeded, but now the shares are unsaleable. This shows how little real legitimate mining investments are made in this colony; the great object with all is—get up the shares as high as possible—sell out—and (to use a homely phrase) "the d—l take the hindmost."

ADELAIDE, AUG. 28.—The mining interest is active, and the market very firm. Burra Burra shares had advanced to 201*l.* to 203*l.* each; Princess Royal, 25; Britannia, 2*l.* 5*s.*—Port Lincoln, 6*l.* 10*s.* to 7*l.*; Phoenix, 75 to 100 per cent. advance on deposit; Adelaide, 1*l.* 2*s.* to 1*l.* 5*s.*; North Kapunda, 1*l.* 2*s.*; Mount Remarkable 10*l.*; Mount Liverpool, 3*l.*; Strathalbyn, 5*l.*; Royal Mining Co., 12*l.* 10*s.* to 1*l.* 11*s.*; Victoria, 6*s.*; Wheal Barton, 5*l.* 5*s.*; Wheal Gawler, 6*l.*; Wheal Margaret, 3*l.*; Wheal Maria, 1*l.* 10*s.* to 1*l.* 11*s.*; Wheal Friendship, 9*l.* to 9*l.* 10*s.*; Broadalbyn, 10*s.* to 1*l.*; Enterprise, 2*l.* 10*s.*; Wheal Emma, and Mary Consols, at par. It will be seen by the above that several new mines had been opened. An important discovery had been made at Montacute.—The freights to Great Britain were—copper ore to Swansea, 3*l.*; and to London and Liverpool, 2*l.* 10*s.* per ton.

## THE GOLD OF CALIFORNIA—REMARKABLE ESTIMATE OF THE EXPORTS OF GOLD.

The annexed statement exhibits the amount of gold dust shipped from San Francisco, by the steam-ships leaving that port for Panama, from the 11th of April, 1849, to the 4th of October, 1850:—

| Dates.         | Passengers. | Gold Dust.    | Dates.         | Passengers. | Gold Dust.      |
|----------------|-------------|---------------|----------------|-------------|-----------------|
| April 11 ..... | 75          | \$ 166,638 07 | May 1 .....    | 88          | \$ 1,386,496 03 |
| May 1 .....    | 34          | 340,553 35    | June 1 .....   | 246         | 2,344,324 04    |
| June 20 .....  | 74          | 345,820 24    |                |             |                 |
| July 2 .....   | 35          | 263,164 44    |                |             |                 |
| Aug. 2 .....   | 110         | 535,563 93    | July 1 .....   | 3173        | \$13,329,388 62 |
| Sept. 1 .....  | 253         | 875,500 70    |                |             |                 |
| Oct. 1 .....   | 291         | 253,891 62    | Total .....    | 3355        | \$15,129,388 62 |
| Nov. 1 .....   | 212         | 915,717 09    | July 15 .....  |             | 1,076,043 09    |
| Nov. 15 .....  | 258         | 420,062 00    | Aug. 1 .....   |             | 1,961,862 09    |
| Dec. 1 .....   | 157         | 707,294 88    | Aug. 15 .....  |             | 773,257 09      |
| Jan. 1 .....   | 278         | 896,463 57    | Sept. 1 .....  |             | 1,800,000 00    |
| Jan. 15 .....  | 237         | 355,306 93    | Sept. 15 ..... |             | 1,700,000 00    |
| Feb. 1 .....   | 202         | 659,932 09    | Oct. 1 .....   |             | 1,800,000 00    |
| March 1 .....  | 248         | 1,138,709 76  | Oct. 4 .....   |             | 1,250,000 00    |
| April 1 .....  | 229         | 1,453,634 42  |                |             |                 |
| April 20 ..... | 116         | 568,886 56    | Total .....    |             | \$25,100,550 62 |

The amounts named above are merely the sums on the freight list of each steamer. The amounts brought by passengers are only guess work; and although they have, without doubt, been large, it is hardly possible to form even an estimate approximating the truth. Sailing vessels from San Francisco direct to this and other Atlantic ports, to Panama and other ports of the Pacific, have taken many millions of gold dust. It appears to us fully safe to estimate an exportation of, at least, \$50,000,000 gold dust from San Francisco by sea within the above-named period. It will be seen that since February last the monthly shipments have been very large compared with those made previously—the inference from which is, that the great increase in the number of miners has proportionally increased the product. In August the shipments amounted to \$2,785,119; September, \$3,200,000; and in the first four days of October, \$9,050,000. This is an average of about \$3,000,000 per month, provided no more shipments are made in October. We, however, make no such provision, for it is our impression that the steamer, or steamers, which left San Francisco on or about the 15th October will bring between two and three millions of gold dust, which, added to the amount above reported, shipped since the 1st Oct., will make an average monthly shipment of nearly \$4,000,000 in gold dust. This is enormous, and the public hardly realise its magnitude and importance. We can well recollect the time, within the past three years, when an arrival of \$2,000,000 or \$3,000,000 of specie from any other part of the world would have created as great an excitement in financial and commercial circles as any event we can call to mind. That was when the coin was merely transferred from one commercial point to another; but now, when we are receiving \$3,000,000 and \$4,000,000 a month—month after month—direct from the mines, and when it is so much added to the supply of precious metals in the world, it hardly causes a remark, and has no visible effect upon the movements of commerce. Those who are looking back to the stock speculations of previous years, and making efforts to trace similar effects from similar causes, must bear in mind that we have not had the gold mines of California to draw upon for immense amounts of gold dust, but have expanded from time to time, without any basis for the credits created by the increase of contracts. So long as the expansion is healthy and sound, no apprehensions need be entertained that a revulsion is at hand, or that any great depreciation will be realised in prices for stock securities or any species of property.—*New York Herald*.

## New Patents.

## SPECIFICATION ENROLLED DURING THE PAST WEEK.

G. H. FORD, of St. Martin's-le-Grand, gentleman: For improvements in obtaining power. The "power" proposed to be obtained by Mr. Ford is, as will be perceived from his claim, neither more nor less than the long-sought-for "perpetual motion." "I claim the adaptation of certain principles of nature to machinery, using as a principal vehicle the well-known and used laws of centrifugal force, to avail myself of the laws that govern elastic fluids, heretofore unknown as a motor, and whereby I am enabled to destroy the equilibrium of power between the moving parts, precisely as in the steam-engine; and I am enabled to keep up this destruction of equilibrium with much less power than is produced thereby; and the power so to be, and that can be produced, is limited only by the capability of matter and machinery to sustain it, and is in principle infinite."!!

## LIST OF PATENTS GRANTED DURING THE PAST WEEK.

T. Watson, of Rochdale, Lancashire, hat manufacturer, for improvements in the manufacture of hat plush, and also in machinery or apparatus employed in such manufacture.  
R. Shiers, of Oldham, Lancashire, manufacturer, and J. Heginbottom, of the same place, manager, for improvements in the manufacture of textile fabrics.  
J. Bernard, of Green-street, Grosvenor-square, gentleman, and J. B. Durell, of 30, Cité de l'Étoile, Thionville, France, for improvements in the manufacture or production of boots and shoes, and in the materials and machinery or apparatus to be employed.  
B. Hiney, of Birmingham, brassfounder, improvements in the manufacture of castors.  
J. A. Franklinsky, of Stanhope-place, Middlesex, gentleman, for improvements in public carriages for the conveyance of passengers.  
E. Riepe, of Finsbury-square, London, merchant, for improvements in refining steel.  
J. Whitcomb, of Chichester, engineer, for certain improvements in machinery or apparatus for spinning and doubling cotton, and weaving cotton, flax, and other fibrous substances.

## DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

W. Stidolph, Bath, the chiron for teaching and enabling the blind to write.  
T. Diamond and Son, of Clerkenwell-green, spring bolt.  
W. Southern, of Nunston, self-acting millstone ventilator.  
J. J. Galt, Portsmouth, cape.  
Lincoln and Bennett, Sackville-street, Piccadilly, ventilating hunting cap.  
S. Solomon, Commercial-place, City-road, marine balance time-keeper.  
J. Parker, Montpellier-avenue, Cheltenham, lady's railway portmanteau.  
J. H. Cutler, Birmingham, button.  
R. and H. Williams, Ludgate-hill, self-opening parasol. [Steam-engines.]  
J. Platt, of Oldham, Lancashire, engineer, for improvements in the supply-pipes of T. Oldham, Manchester, shirt.  
J. Bally, Mount-street, Grosvenor-square, peasant, poultry, and cattle fountain.  
P. Elgby, Grove-street, Liverpool, apparatus for burning spirits for the purpose of obtaining heat for portable cooking apparatus.  
A. Clayton, Lymington, Hants, gun-maker, tube for Col. Hawker's new ignition.  
G. Twigg, Birmingham, dress fastener.  
T. Oldham, Manchester, shirt front.  
Hargrave, Harrison, and Co., Wood-street, Chapsdale, parasol.—*Mechanics Magazine*.

**INSTANTANEOUS AERATED LIQUOR MACHINE.**—Among the many novelties of this "patent age of new inventions," we have had our attention directed to an elegant and highly useful apparatus, introduced and patented by a Mr. Bassett, by which soda water, effervescing lemonade, and other cooling drinks of a similar description, can be prepared in one or two minutes with the greatest facility, and at a merely nominal expense. It consists of a small cylinder, 5 in. long by 2 in. in diameter, with a top which unscrews; from which projects a cork screw, having a hollow axis open to the inside of the cylinder, and small holes for the escape of the carbonic acid gas. The cylinder being charged with carbonate of lime and dilute sulphuric acid, the worm is screwed through the cork of a bottle filled with common water, which, becoming saturated with the gas, in a very short period produces a soda water unsurpassable in quality. Gooseberry and other common British wines, the light wines of the continent, and every description of drink, may be thus treated with carbonic acid to any extent of effervescence required, and simulating champagne. The apparatus is carried in the pocket without the slightest inconvenience, and, for travellers and domestic purposes, must prove highly advantageous. To persons engaged in mining enterprises and similar pursuits in Mexico, Brazil, and other tropical climates, this ingenious little instrument will prove most valuable, the only stock in hand to enable it to work being some chalk or broken marble, and dilute sulphuric acid. Messrs. Wheatly, of Leadenhall-street, are the agents.

The difficulty attending the destruction of the vermin of various kinds, by which our dwellings are so often infested, is well known, and arises, doubtless, chiefly from the extraordinary powers of increase with which such noxious intruders are endowed. When we are told that from one female bug no fewer than 22,000,000 of bugs can be hatched in one year, and that a pair of rats, with their almost unlimited number of descendants, will, in three years, consume food enough for about 50,000 men—the fecundity of other vermin being in proportion—it may be easily conceived that the results of their voracity, to say nothing of other nuisances consequent on their presence, convey the idea of something fearful. Under such circumstances, the importance of some mode by which mice, rats, beetles, bugs, &c., shall be effectually destroyed, and which at the same time induces no concurrent inconvenience, will be fully appreciated. Such an agent is stated to be found in the "Vermin Annihilator," invented by Messrs. Bradfield, Cumming, and Co., which is said to destroy by evaporation, reducing the vermin under its operation to a powder. After many successful trials, it is now publicly introduced; and in one case, mentioned to us on undeniable authority, a basement of a nobleman's mansion, which had swarmed with beetles and cockroaches, was entirely cleared by the application of the material for a single week—its efficacy being so powerful as to cause their entire disappearance. Not the least recommendation of the "annihilator" is, that it can be placed at night and removed in the morning, and that cats and dogs will not touch it. With such advantageous qualities, it can hardly fail to attract the attention and patronage of careful householders.

**HOLLOWAY'S PILLS A CERTAIN CURE FOR DROPSY.**—Extract of a letter from Mrs. Loddham, of Leamington, dated Oct. 15, 1850.—"To Professor Holloway—Sir,—It is with gratitude that I write to inform you of the wonderful cure effected on myself by taking your pills for a severe case of dropsy. The disease appeared about five years ago, and notwithstanding the various remedies tried, and the different medical men I consulted, all seemed unable to check its progress. At last I was so much swollen that I could scarcely walk. At this crisis I commenced taking your invaluable pills, by means of which, and strict attention to your printed directions, I am now perfectly cured."—Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.



## Mining Correspondence.

## BRITISH MINES.

**ALFRED CONSOLS.**—The 89 fm. level is driven east of Field's engine-shaft 3 fms.—this driving presents no new feature since the last report. The men that were sinking No. 1 winze under the 70 fm. level, east of said shaft, are for the present put to stop a piece of ground west of said winze, until the water is drained by virtue of the 80 fm. level. The lode in No. 2 winze is 4 ft. wide, and apparently will soon reach to 6 ft. in width, worth for copper ore 1000 lbs. per ton. The lode in the 70 fm. level, east of engine-shaft, is in the present end from 4 to 5 ft. wide, worth from 1000 to 1200 lbs. per ton; and from the appearance of the lode in the winze sinking under the 60 fm. level east, we expect it will soon enlarge and improve in value; the lode in this winze is quite 7 ft. wide, and will produce at least 20 tons per fm., worth 1400 lbs. per ton. The lode in the 60 fm. level east is about 4 ft. wide, containing muddle, spar, capels, and a small quantity of copper ore. No other change since the last report.

The following is a report from Capt. S. H. Thomas, manager of the Alten Copper-Works, in Norway, after a private inspection of the mine:—  
Dec. 3.—Yesterday I inspected the Alfred Consols, and there found the lode equally good as reported. For a depth of 55 fms. below the adit the engine-shaft has been sunk in dead ground, but at this depth the west end of their present rich bunch of ore was intersected. The dip of the ore in the lode is easterly, whilst the underlay is northerly. Above the 60 fathom level there is not much ore in sight, but in the easternmost winze, sinking under the 60, there is a most splendid, and apparently an improving lode; in the bottom of this level there are extensive and good reserves of ore ground, which will be taken away with great advantage as soon as the lode is holed with Wylid's shaft, west of the 60 fms. level, which will be done in about a month hence, when the returns of ore will be much increased, and, consequently, the profits will be proportionately larger. The 70 fm. level is very splendid, with a large, rich, and regular lode; winze No. 1 in this level, as you are aware, passed through the dip of the ore, but to the depth of 6 fms. or 7 fms. under the level the lode was very rich, and productive. No. 2 winze, still further on, about 3 fms. below the bottom of the 70, contains a splendid course of ore, which appears to be opening in depth, and a very perceptible improvement in the quality of the lode has taken place within the last few feet. The 80 fm. level has only been commenced very recently, and has not yet been driven far from the shaft; it contains as yet but very little ore, but on advancing a few fathoms further easterly, I am firmly convinced that the bed of ore will be intersected equally rich as it has been found in the 60 and 70, when the value of the mine will be considerably enhanced. The water charge has hitherto been very high, in consequence of the drainings from the Old Wheel Alfred, where the water has sunk from 35 to 40 fathoms below the adit. The Alfred Consols western ground has not been explored for fear of approximating the old workings too near, when the whole of the water would be drained from them at the expense of the Alfred Consols Company; but now that a large and powerful engine is to be erected at the old mine, the western levels will be resumed with every prospect of a successful result. On Wylid's shaft being holed to the 60, large returns of ore will be made at very little cost. The tribute pitches are now working for 19. In 17, the tributers paying the cost of materials, smiths, drawing, dressing, &c., leaving the water charge, management, and charges to be defrayed by the surplus, which you can imagine, from the low tribute, must be very large. On increasing the tribute, which will be done very shortly, the water charge and general charges will not be increased, consequently the profits will be hereafter, and for some time to come, even with the present discoveries, very great, and increase every month. The dividend at the next account, it is confidently asserted, will be double that of the last; and from the judicious management displayed in the prosecution of the mine, and the preparation of the ore, as well as from the general good arrangements which are everywhere visible, as well as the surface as in the mine, the shareholders will certainly not be disappointed in their expectations of obtaining permanent and profitable returns. I shall visit this promising mine again ere long, and shall then, undoubtedly, be able to hand you a report even more favourable than this.

**BEDFORD UNITED.**—We shut out into the lode in the 115 fathom level, east and west of Andrew's winze, by setting-day, the 6th inst. The lode in the 103 fm. level east is 4 ft. wide, and still yielding 10 tons of ore per fm. In the 90 fm. level east the lode is 18 in. wide, producing a little saving work; in Arscott's winze in this level the lode is worth 7 tons of ore per fathom. We are driving by the side of the lode in the 80 fm. level. The ground in the 47 fm. level north continues favourable; on the whole, our prospects are very encouraging.

**BODMIN CONSOLS.**—Saturday last being our setting-day, I set the engine-shaft to sink 10 fms. for 1200, being 122 ft. per fm., to nine men, which I expect to be completed in three months. The 13 fm. level north to three miners and three labourers, at 51. 3s. per fm.; we have some good stones of lead in this end; the lode is 4 ft. wide; ditto south let to two miners and two labourers, at 41. 4s. per fm.; this end is looking more favourable; the ground is easier for driving, and the lode looks more promising than the lode in this shaft at present. No. 1 winze south is suspended, in consequence of water. We are now sinking No. 2 winze south; here we have the lode very large, with lead interspersed throughout; I think we are very likely to see something good here.

**BYRN-ARIAN.**—The lode in the 20 fm. level, west of the engine-shaft, is still large and ore, rather improved since last week. The lode in the 10 fm. level west is 5 ft. wide, and, although ore, is not rich. The stop in the back of this level is now yielding 12 cwt. of ore per fm. We have suspended the driving of the adit west, and commenced sinking a winze to communicate to the level below; when this is completed we shall be enabled to set another stop, west of the present one, in the back of the adit level. The stop in the back of this level is yielding 15 cwt. of ore per fm. The weather is again favourable, and should it continue so until Friday, we can sample 20 tons of ore. The erosion of the wheel, &c., at Pensarn, is in full course.

**BRYNTAIL.**—The eastern stop in the 10 fm. level will now produce 2½ tons per fm.; the 10 fm. level going east will produce 2 tons per fm. The western stop in the 5 fm. level will produce 3 tons per fm. The fourth cross-cut driving north will produce 4 tons per fm. We continue to get fine stones of ore from the lode at boundary, but have not yet got through it. I calculate we are breaking from 45 to 50 tons monthly, with our present force. Our field of machinery is insufficient to dress that quantity until the erection of the crusher now coming from Cornwall. I shall forward 20 tons to Bagillt this week for sale.

**CALLINGTON.**—The lode in the 125 fm. level north is about 10 in. wide, opening tribute ground; the lode in the 125 fm. level south is 6 inches wide, producing stones of silver-lead ore. We have commenced sinking the diagonal shaft below the 125 fm. level—price 160 lbs. per fm.; we expect to sink this shaft from 2 to 3 fms. before getting the lode in the shaft, the shaft at present being in the hanging or western wall. The lode in the 112 fm. level south is 9 in. wide, yielding work of coarse quality. The count-house shaft is sunk below 2 and 3 fms. below the 100 fm. level; we expect to meet with the lode in this shaft about the 112 fm. level. At the south mine, in the 119 fm. north, the lode is 1 ft. wide, producing from 3 to 4 cwt. of silver-lead ore per fm. At Kelly Bray, the shaftmen are still engaged in cutting plat in the 60 fm. level; but we expect to complete it in the course of a few days, when we shall cease and divide this shaft from the 40 to the 50, fix plunger lift, &c., at the latter level, preparatory to our sinking below. The lode in the rise in the back of the 70 fm. level is 4 ft. wide, producing from 2 to 3 tons of copper ore per fm.

**CALSTOCK UNITED.**—Our setting day was on the 30th Nov., and we have had a well-attended survey. The various levels are taken at about the same prices as last month, which you will see by the list sent. The 28 fm. level, east of Caroline shaft, on a canter lode, has produced in small quantities some very rich stuff in lead and silver ore, indeed, is of a fine quality; in this level there are driving through good tin ground, with the main part of the lode standing. The tribute department is producing a fair quantity of good work. We have a pile of very rich tin stuff from the western pit. Our first cargo of ore is nearly ready for shipment; this having been raised at 5s. in the 17, will, after paying dues (1-20th), leave the adventurers a profit of 70 per cent. The surface operations are as farward in reference to the engine as the engineers. A highly respectable agent has offered to take for 12 months the whole run of our silver lode, and give us 10 per cent. on the gross produce, which the directors will not entertain.

**CWMYSTWITH.**—The lode in the 30 fm. level west is very strong, with a little ore in it. The 26 east is not so good, but has gone through some good ore for about 10 fms. The stopes are without alteration. We expect 80 tons of lead ore at the sampling next Monday.

**DEVON AND COURTEAY.**—The lode in the 60 east end is getting into settled ground, and forming itself more regular, and assuming a better character than it did before; it is composed of peach, prinn, muddle, quartz, and copper ore; the west end is at present poor. The men are progressing well with the south end, and the pitwork is in good condition. Our works are all progressing well.

**EAST CROWDALE.**—The middle shaft is down 9 fms. 4 ft. 6 in. below the 40, and will reach the 50 fm. level by the end of next week, when we shall commence driving east and west; the lode in the bottom of the shaft is large and well-defined, producing good silver-lead ore. The lode in the 40 fm. level, east of the shaft, is 4 ft. wide, and has been driven about 25 fms.; the lode in this level is driving through good tin ground, with the main part of the lode standing. The tribute department is producing a fair quantity of good work. We have a pile of very rich tin stuff from the western pit. Our first cargo of ore is nearly ready for shipment; this having been raised at 5s. in the 17, will, after paying dues (1-20th), leave the adventurers a profit of 70 per cent. The surface operations are as farward in reference to the engine as the engineers. A highly respectable agent has offered to take for 12 months the whole run of our silver lode, and give us 10 per cent. on the gross produce, which the directors will not entertain.

**EAST SHARP TOR.**—The underlay of the wall, alluded to in my last, is about 5 ft. in. We have cut through it, and find more lode of a promising description, composed of quartz, spar, peach, strong capels, with muddle, and beautiful spots of grey and yellow copper ore interspersed throughout it. We shall continue to sink perpendicularly, until we reach the north end of the lode. A slight delay in sinking has taken place since my last, in consequence of the bottom lift, which is 7 ft. in. being too small to keep the water properly under control. I am glad to say that difficulty is now overcome, by fixing an 8-in. one in its place, which keeps the water at present under command very well.

**EAST WHEEL GEORGE.**—To-day, being our usual monthly setting, we let the following bargains:—The 12 fm. level, west of the engine-shaft, by two men, at 21. 5s. per fm., lode small and unproductive at present; this level is extended about 46 fms. west from shaft. The 12 fm. level east, by six men, at 21. 10s. per fm.; the lode in this end is 3 ft. wide, regular and defined, composed principally of capel, spar, peach, and muddle. The lode in the back of the 15 fm. level, west of shaft, is 4 ft. wide, and is rising, by two men, at 17. per fm., lode worth 150 lbs. per fm.; the stopes in the back of the 19 fm. level, west of shaft, and to the west boundary of Leech's land, by two men, at 30s. per fm., lode producing fair work. We set a rise in the back of the 12 fm. level, west of

the engine-shaft, in Leech's land, by four men, at 11. 10s. per fm.; we hope, when this rise is communicated with the adit level, to have very good lead ore for future stopping. The engine-shaft is now down 7 fms. below the 13 fm. level; in consequence of the heavy rains having let down so much water, the men have not been able to sink the shaft as fast as they otherwise would; the ground in the shaft is much as usual. All the ores that have been sold to the present time have been raised in Mr. Leech's land, which is 40 tons 9 cwt. 3 qrs., produced from 34 fms. of ground, leaving 5 tons undressed on the floors. We are now preparing another parcel for market from Adam's land.

**EAST WHEEL JOSIAH.**—The lode in the adit end and still is still large; we are carrying about 3 ft. of the western part, which is composed principally of flookan, spar, muddle, &c.; the ground is favourable for driving, the price being 45s. per fm.

**EAST WHEEL LEISURE.**—The newly discovered lode has been cut into 4 ft., and no small wall yet; it is a fine lode, composed of strong yellow ore and spar, with a little white lead. A good pile of work is already drawn to surface, which will be added to in a few days. The lode in the winze sinking under the adit is 3 ft. wide, composed of Jack and ore.

**ESGAIR LEE.**—Our setting was on the 30th Nov., of which the following is an account:—The deep adit, east of Owen's winze, on the canter lode, by six men, 4 fms. stent, or the month, at 41. per fm.—lode poor at present. The 12 fm. level, east of Morgan's winze, by six men, 4 fms. stent, or the month, at 41. per fm., lode is looking promising, yielding about 4 tons of ore per fm. To stop in the back of the deep adit, east of Owen's winze, by four men, 8 fms. stent, or the month, at 31. per fm., lode yielding about 4 tons of ore per fm. The stopes in the bottom of the 12 fathom level, east of Owen's winze, by four men, 8 fms. stent, or the month, at 31. per fm., lode yielding about 4 tons of ore per fm.; the stopes in the back of ditto, east of Harding's winze, by six men, 12 fms. stent, or the month, at 11s. per fm., lode yielding about 3 tons of ore per fm.; the stopes in the back of 12 fm. level, west of Harding's winze, by four men, 8 fms. stent, or the month, at 31. per fm., lode will yield about 6 cwt. of ore per fm. The stopes in the back of the 12 fm. level, west of Morgan's winze, by six men, 10 fms. stent, or the month, at 21. 10s. per fm., the lode in this stop will yield, on an average, from 10 to 15 cwt. of ore per fm.; the stopes in the back of this level, east of Morgan's winze, by four men, 8 fms. stent, or the month, at 31. per fathom, lode yielding about 4 tons of ore per fathom.

**HEIGSTON DOWN.**—The lode in the 45 fm. level, east of Doidge's winze, is 3 ft. wide, carrying a small proportion of copper ore; the lode in the winze sinking below this level is 2 ft. 6 in. wide, 1 ft. of which is good saving work for copper ore. The lode in the 35 fm. level is 3 ft. wide, producing occasional stones of ore; the rise above this level is without alteration; the ground in the cross-cut south is eased for driving. On Saturday last we set Hitchen's shaft to sink below the 35 fm. level, by six men. The lode in the 35 fm. level, west of Hitchen's shaft, is much the same as last reported on.

**HOLMBUSH.**—The ground in the engine-shaft, sinking below the 120 fm. level, is getting more favourable. In the 132 fm. level cross-cut south, the ground is favourable; also in the north cross-cut in this level, which has been suspended for a few days during the sampling; the lode in the 132 fm. level, west of the diagonal shaft, is 2 ft. wide, producing 4 tons of copper ore per fm.; the lode in the stopes in the back of this level will produce 4 tons per fm.; the 133 fm. level end is about 23 fms. from the lode, and we think will continue productive home to it. The flap-jack lode, in the rise above the 120 fm. level, is 12 in. wide, nearly as far as 2 feet long, and the rise is 4 ft. wide, and spots of ore in the ground are favourable, and we hope to make a communication to the 130 fm. level in another month. The lode in the 120 fathom level south is 8 ft. wide—muddle, prinn, and stones of lead; we are clearing the north end in this level; the pitches in the back are rather improved. The flap-jack lode, in the 100 fm. level, east of the great cross-course, is 4 ft. wide, yielding 3 tons of copper ore per fm.; the lode in the winze sinking below this level is 5 feet wide, and will produce 8 tons of ore per fm.; the tribute pitch in the back of this level is much the same—the men are getting wages at 41. 10s. per fm. At times, for some years, has the mine looked so promising, as to become a dividend-paying one, which the points of view, as noticed in this report, will show, as well as the probability of many other places in the mine being also worked. We purpose driving the 70 fm. level, west of Wall's engine-shaft, on the flap-jack lode, to communicate to the pitch in the back of the 110 fm. level. After the rise is holed to the back of the latter place, we shall remove the 130 fms. of air pipes now in the 120, and save the expense of making new ones to fix in the 70 fm. level, which must be done before we can commence driving it. When this is done, a thorough ventilation will be effected from Hitchen's to Wall's engine-shaft, from the 70 to the 120 fm. level. We think that the last named shaft will have to be sunk, say, 20 fms., no very distant period, and then cross-cut north to intersect the main and south lodes—and south, to cut the flap-jack lode, and at that depth extend the lodes eastward on the course of each lode into the granite, as we fully believe they will be found productive, the stratum being a beautiful light blue killas, very compact, and at the foot of a granite hill, very similar to that of the Carn Brea Mines. Three lodes, in so favourable a position, cannot fail in producing a great quantity of mineral. Wall's shaft might, we think, be sunk 10 fms. further, and the ground for carrying the water over it, to run back to Hitchen's shaft, when the time arrives for so doing, we having at present some work to accomplish previously. If we are fortunate enough also to meet with a good lode in the 132 fm. level cross-cut, north of the diagonal shaft, that should also be sunk to the 140 as speedily as possible. In such a case we should gain time by it, which is of great importance; also, of course, to continue sinking Hitchen's shaft to the 140 fm. level, and from thence drive a cross-cut south, to intersect the flap-jack lode, which is underlying towards the shaft, as well as to drive north to cut the main lode one and the same time, should not the diagonal shaft be sunk. The above work we have had in contemplation for some time, and we are sanguine that you will consent to the same being carried out the first opportunity we can conveniently commence operations at one or more of the places above mentioned. We sampled on Friday last, at Calstock Quay, 164 tons of copper ores, computed 70, 60, and 34 tons, and we shall sample a parcel of lead, computed 30 tons, on the 10th inst.

**KIRKCUDBRIGHTSHIRE.**—The lode in the 74 end, west of Stewart's shaft, is 5 ft. wide, with a good stone of ore in the back of the end. The lode in the 62 end, west of Keith's, is large and kindly, with spots of ore. The lode in Gilpin's shaft is large and kindly, yielding 1 ton of ore per fm. The lode in the 50 end, west of Gilpin's shaft, is very large, with spots of ore, apparently improving in quality. The lode in the 40 end, west of ditto, is also very large, with good stones of ore occasionally. The lode in the 30 end, west of ditto, is large, with stones of ore at times.

**LAMHEROOF WHEEL MARIA.**—List of prices set for this month:—The engine-shaft cross-cut north set at 84. per fm., for the month. The stopes in the back of the 60 set at 41. 10s. per fm., for the month. The end east set at 30; owing to the level being choked up with rubbish it could not be measured, but shall do so to-morrow, by which time it will be cleared. The 50 end east set 2 fms., at 81. per fm. The B lode is set to sink 3 fms., at 84. per fm.; this lode appears to be increasing in size and depth, and is much the same as last reported. Thos. Carne and partners have contracted to sink the shaft on the Chapman lode, from the 20 fm. level as deep as the 80, for the sum of 700, and having sunk the shaft, to be sunk at the 30 end, they picked up all their underground working apparel, and left the mine. How am I to deal with these men?

**LEWIS.**—I expect the sump winze-shaft will be completed to the 90 fathom level this week, when we shall commence driving south to cut the lode. In the 80 cross-cut, south of the shaft, we have intersected the south lode, producing good stones of tin. In the winze sinking under the 70 fm. level, the south lode is 4 in. wide, worth 37. per fm. The new lode in the 70, west from copper ore shaft, is 3 inches wide, worth 37. per fm.; the new lode in the 70, east from tin shaft, is 10 in. wide, worth 21. per fm. The new lode in the 60, east of tin shaft, is 9 in. wide, unproductive. Cock's lode in the 50, east from copper ore shaft, is 5 inches wide, producing stones of tin. The new lode in the 40, west of copper ore shaft, is 1 foot wide, worth 41. per fm.; ditto east from tin shaft the new lode is 15 in. wide, worth 41. per fm. The new lode in the 40, east of tin shaft, is 18 in. wide, with promising appearance. The new lode in the 30, west from copper ore shaft, is 6 in. wide, worth 21. per fm.; ditto east of tin shaft this lode is 4 inches wide, unproductive. The new lode in the 20, west of copper ore shaft, is 18 in. wide, worth 41. per fm.; ditto east this lode is 6 in. wide, unproductive. Cock's lode in the 20, east from copper ore shaft, is 1 ft. wide, worth 51. per fm.

**LLWYNMALES.**—Nov. 30.—The water in the mine now begins to decrease, and I hope on Tuesday or Wednesday next we shall be enabled to resume driving the 8 fm. level; the stopes over the 8 fm. level are still at work, and continue good. The water in the 8 fm. level has prevented us drawing up the ore, so that we have not been able to do as much with the dressing as we otherwise could.

Dec. 3.—Since the above was written, the water is getting much lower, and the engine is working better than usual. The ore in store, which is sold, shall be shipped per first vessel.

**NORTH BASSET.**—The lode in the 82 fm. level is 5 ft. wide, composed of grey ore. In the 72 the lode is much improved since last reported, and is now 3 ft. wide, composed of yellow ore. In the winze sinking below the 62, lode 3 ft. wide, composed of spar and yellow ore. In the 62 fm. level lode 4 ft. wide, composed of gossan and grey ore. In the 52 fm. level lode 1 ft. wide, composed of gossan and yellow ore. No alteration in any other part of the mine.

**NORTH WHEEL BULLER (OR GREAT SOUTH TOLGUS).**—Nov. 23.—The 50 fm. level west is very promising to be productive, having a regular lode of spar, jack, and muddle, about 1 ft. wide, issuing a good deal of water, which indicates an improvement, and proves to us, in a measure, that there is a good piece of ground from the 30 fm. level below it. The 40 fm. level west continues promising, and nothing has appeared to alter our opinion that it will shortly be as good, or better, than the 30 has been; the lode is 2 ft. wide, composed of beautiful spar, with Jack and copper ores intermixed. The 30 fathom level west has been improving since I last wrote you; this morning we find the lode 2 ft. wide, and worth 200 lbs. per ton; opening ground over and under that will work at a very small tribute, which we shall avail ourselves of as soon as the level and Noel's shaft is communicated, which at present is within a few fms. of being forked, and the shaft about 4 fms. of being down to that level, in which the ground is of that nature that we reasonably calculate of a continuance of ore.

Nov. 30.—We are pleased to notice that the prospects of the mine generally do not diminish; but the 30 is not so good as reported last week, although a very kindly lode, and producing good ores; the level below continues to look well, but without ore to save. The 50 is much improved in appearance; the 60 is also improved.

**PENTIRE GLAZE AND PENTIRE (UNITED).**—The north lode is improving daily, and at present producing more than its usual quantity of ores. The late discoveries in the new or middle lode are progressing very satisfactorily. We are proceeding with the workings in the deeper levels as fast as possible, that we may open more ground, and raise a larger quantity of ores, which we shall speedily effect.

**PEN-Y-BANK AND ERLGLODDE (UNITED).**—The lode in the adit level is large, with small branches of ore, but not of any value. The winze-shaft at Pen-y-bank is now cleared and scored 16 fms. from surface, and 8 fms. below the adit.

**PENZANCE CONSOLS.**—We are looking well indeed here. There is a good course of tin, 3 ft. wide, for 5 fms. in length on the north lode; this lode is now opened on for 12 fms., and tin throughout. We have also a good course of tin on the south lode. In fact, the mine is looking better than it has done for 12 months past, and there is every probability of its continuing to do so.

**POLBERRO MINES.**—The prospects in the tribute department on the tin ground continue favourable. The produce for the last two months amounts to 58 or 59 tons. The copper lodes are not looking so well, although still promising; 139 tons of copper ore were sampled on the 26th November.

**SOUTH TAMAR CONSOLS.**—The engine-shaft has been sunk 2 fathoms 1 ft. 9 in. in the past month; it is now down 6 fms. 3 ft. 9 in. below the bottom of the 120 fm. level; the lode in it is 3 ft. wide, with branches of lead, worth 5 cwt. per fm. In the south end, in the 119 fm. level, the lode is 4 ft. wide, exceedingly kindly, producing 7 cwt. of ore per fm., and there is every probability of its improving, as we have no doubt reached the fine run of ore ground in the level above; in the north end, the lode is 4 ft. wide, and the 119 fm. level, west of shaft, is 4 ft. wide, and the 100 fm. level, the lode in the south end is worth 12 cwt. of ore per fm.; the level has been driven 12 fms. 6 in. during the past month, and laid open a fine piece of highly profitable ground. In the north end the lode is 4 ft. wide, and yielding 7 cwt. of ore per fm.; the air in the

end being poor, the men are placed to rise to the 90 fm. level. In the 90 fm. level south the lode has been gradually improving, and is now become settled and well-defined, carrying good walls, and underlying about 1 ft. in a fathom; it is 3 ft. wide, composed principally of fluor-spar, and yielding 6 cwt. of ore per fm.; in the north end the lode is in disordered ground, and at present poor and unproductive. In the 80 fathom level south there is no alteration to notice; the lode produces occasional stones of ore, but scarcely any saving work. The 30 fm. level south is suspended, as the produce of the lode is all stamps' work, of which we have already so much at surface that we cannot deposit more without incurring considerable expense. The pitches in the back of the 60 fm. level have been rather less productive than during the previous month. In the 60 fm. level we have had a considerable improvement, the lode in the bottom of the level being worth 30 to 35 cwt. of rich ore for silver. The one will make up for the other, and the sampling will be fully supported; at the same time, it is satisfactory to be able to state that we are increasing our reserves of ore ground. The parcels of ore purchased by Messrs. Walker, Parker, and Co., was shipped on Saturday last; it weighed 90 tons 1 cwt. The new steam-engine is not yet arrived; I have advice of its being shipped, but can hardly expect the vessel to come up against the strong easterly winds which have prevailed for the last week.

**SOUTH TOLGUS.**—The levels in the eastern ground have improved; the 54 east is now yielding 14 tons of ore per fm. The 42 east is also yielding 14 tons per fm.; the 42 west 4 tons per fm. The north lode, in the 12 fm. level west, is yielding 1 ton per fm.; the same level east 4 tons per fm.

**TAMAR.**—In the 205 end, driving south from the engine-shaft, the lode is 1 ft. 10 in. wide, rich work. In the 190 end the lode is 2 ft. wide, composed of muddle and capel, with spots of ore. In the 175 end the lode is 18 in. wide, of a congeal appearance, and passing through ground which will set at a low tribute. In the 160 end we are still driving on the eastern part of the lode, which is about 24 feet wide, and producing a moderate quantity. In the 145 end the lode is 3 ft. wide, very rich work, a promising end. At Spurgin's shaft we have commenced driving north and south in the 160 fm. level; this lode, in both of these ends, is opening ground of a profitable nature. At the north mine, in the 90 fm. level, we are still cross-cutting west, but we expect we are getting near the lode, as the end is discharging a large quantity of water. In the 80 fm. level the lode is 18 in. wide, 6 in. of which are good work. In the winze sinking below the 70 fm. level the lode is 2 ft. wide, interspersed with ore. We expect to sample, the latter part of this week, about 50 tons of rich silver-lead ore.

**TINCROFT.**—On Highburrow tin lode, in the 152 fm. level, east of engine-shaft, the lode is 6 ft. wide, worth 181. per fm. In the 143 fm. level, east of Martin's east shaft, the lode is 5 ft. wide, worth 200. per fm. for tin and copper. In the 132 fm. level east the lode is 6 ft. wide, worth 181. per fm. for tin and copper. In the winze sinking below this level the lode is 4 ft. wide, worth 151. per fm. for copper. In the 120 fathom level, west of engine-shaft, on Chapple's lode, the lode is 4 ft. wide, worth 131. per fm. for tin and copper. In the 100 fm. level, west of downright shaft, the lode is 6 ft. wide, worth 151. per fm. for tin and copper; in the winze sinking below this level the lode is west the lode is 8 ft. wide, worth 200. per fm. for copper. In the winze sinking below the 90 level west, is 5 ft. wide, worth 504. per fm. for copper. Groat's lode, in the 80 fm. level, is 8 ft. wide, worth 200. per fm. for copper. In the 70 west the lode is 7 feet wide, worth 451. per fm. for copper; in the rise in the back of this level the lode is 4 ft. wide, worth 181. per fm. for copper. At North Tincroft, the lode in the engine-shaft, sinking below the 110 fm. level, is 5 ft. wide, worth 101. per fm. for copper; in the 110 fm. level east the lode is 4 ft. wide, worth 81. per fm. for copper; in the 110 fm. level west the lode is 4 ft. wide, and much improved since last report, now worth 201. per fathom for copper. In the 100 fm. level, east of Whithughby's shaft, the lode is 3 ft. wide, worth 101. per fm. for tin and copper; in the 100 fm. level, west of engine-shaft, the lode is 4 feet wide, worth 181. per fm. for copper. In the 90 west the lode is 3 ft. wide, worth 131. per fm. for copper; in the winze sinking below this level the lode is 5 ft. wide, worth 151. per fm. In the 90 fm. level, driving west on the south lode, the lode is 3 ft. wide, worth 61. per fm. for copper. At Palmer's shaft, sinking below the 100 fm. level, on East Pool lode, the lode is 3½ ft. wide, with good stones of copper ore; in the 100 west the lode is 3 ft. wide, with spots of ore. In the 80 fm. level west the lode is 2½ ft. wide, but poor. In clearing out the 80, on Dunkin's lode, we are laying open tribute ground.

**TREGORDEN.**—The engine-shaft is down 11 fathoms under the 20 fathom level, where we have driven a cross-cut 8 feet and cut the lode, and we have opened a thousand ft. of it, which varies from 1 foot to 2½ feet wide. In the present end, going north, the lode is now 2 fathoms from the cross-cut, the lode is 2 feet wide, composed of more than the usual quantity of spar, making larger spots of more solid lead than have ever yet been risen in the mine, and it carries a flookan about 9 in. wide. In the end going south (which is 4 fms. from the cross-cut) the lode is 2½ ft. wide, composed of a very soft spar and carbonate of iron, with rich silver-lead ore interspersed throughout, which is also of a larger grain than we have had in our other levels above, and which we shall have to dress in the usual way of lead dressing, instead of stamping all; value 51. per fm., price for driving 30s. per fm. The lode having thus undergone a favourable change from the 30 fm. level to our present depth (21 fms. from surface), I should recommend sinking the shaft again immediately, as I have every reason to expect a still more favourable change as we go deeper. Our engine is doing good duty, and is calculated to put us down 100 fms. or more, if requisite, and also work the stamps, and I have now everything in good order for dressing. We shall sample 6 tons of silver-lead ore in about a fortnight from this time, and from the encouraging prospects, I hope to increase our future samplings.

**TREHANE.**—We have cut through the lode in the 88 fm. level, and opened on it about 4 ft. in length; it is altogether 2 ft. wide, composed principally of fluor-spar, with muddle and lead intermixed, worth at present from 31. to 41. per fm. The underlay from this level (at the cross-cut) is 5 in. per fm., being as small an underlay as we have had between any former levels, which in this respect is a very valuable indication for the 88 fm. level. Other parts of the mine are without any important alteration since the report last week. We sampled yesterday 56 tons of silver-lead ore of the usual quality!

**TRELAWNY.**—At Phillips's shaft, in the 62 end north, the lode is 2 ft. wide, worth 81. per fm. Trelawny's shaft is sunk 3 fms. 2 ft. below the 92 fm. level, the ground is still hard. In the 92 end north the lode is 3½ ft. wide, worth 111. per fm.; in the same level south the lode is 3 ft. wide, worth 101. per fm. In the 82 north the lode is 3 feet wide, worth 71. per fm. In the winze in the bottom of this level the lode is 3½ ft. wide, worth 141. per fm. In the 73 north the lode is 2½ ft. wide, worth 81. per fm. At the north mine, Smith's shaft is sunk 2 fms. 1 ft. below the 55 fm. level, the lode is now nearly 20 fm. 16 ft. per fm., being a very rich lode, and it is expected that the same run of ore will be found here in 6 fathoms driving as in the back of the 60, where we have men rising up to the 30, at 41. per fm. The Wheel Venture lode, in the 32 fm. level, which is our deepest level upon this lode, is looking well; the end going west is worth about 101. per fm. for tin and copper, and the lode is 1½ ft. wide. We shall sample, in a fortnight's time, 20 tons of copper ore, which will be double our last quantity, sold a month since, and raised in the same time. In the Providence Mines, which is the adjoining set to ours, and about 300 fms. south of Wheel Margery lode, large quantities of copper ore are being raised, and it is anticipated that a considerable time, and as we are directly north on a parallel east and west lode, and so near, we expect to have a similar run of ore.

**TRELEIGH CONSOLS.**—In the rise above the 100 fm. level, operations are suspended, as we have only 4 ft. to communicate with the winze below the 90. In the 90 fm. level, west of ditto, the lode is disordered by a cross-brance. In the winze below the 90 fm. level, the lode is 1 ft. wide, not much ore. In the stopes above the 90 fm. level, west of Harrie's winze, the lode is 2 ft. wide, worth 131. per fm. In the 80 fm. level, on the north part, the lode is 18 in. wide, with stones of ore. In the 70 fm. level, the lode is 18 in. wide, with good stones of ore.—Parent Lode: In the 50 fm. level, west of engine-shaft, the lode is 30 in. wide, with stones of ore, and is looking more kindly; the lode being small and poor. In the 40 fm. level, west of the same run of ore, we are driving through disordered ground. In the 30 fm. level, east of ditto, the lode is 18 in. wide, with stones of ore.—Middle Lode: In the 40 fm. level, east of cross-cut, the lode is 18 in. wide, worth 41. per fm.; in the 40 fm. level, west of ditto, operations are suspended. At Burgess's shaft, from surface, we are sinking in the country for the middle lode.

**TRELYON CONSOLS.**—There is a considerable improvement in these mines. On the south part of Wheel Margery lode, in the 60 fm. level, there are several rich veins of grey ore; and it is considered that this part of the lode alone is worth 61. per fm., costing only 55s. to drive it; a few fathoms back in the level the lode is split; but is coming together again, when we expect a much better lode. The middle adit, 20 fm. 16 ft. per fm., being a very rich lode, and it is expected that the same run of ore will be found here in 6 fathoms driving as in the back of the 60, where we have men rising up to the 30, at 41.



Working, Aug. 10.—Whereunder you have my report of work to this date, and my suggestions as to our next course. The water-wheel shaft is 19 ins. 3 ft. 6 in. deep, reset at \$22. per f.m., in which we have met with branches containing yellow sulphur, showing the lode to be near. We have cut through the lode in the cross-cut west by this shaft, and are driving beyond it, to satisfy ourselves of the existence of any proximate lode or to find a guide to the next shaft. The middle gully shaft is only sunk 10 ft. 3 in. this month, in all 10 fms. 1 in. 2 ft. 6 in. deep, and is now being driven until an engine is at work. The south end at the middle gully is now driven 36 fms. 2 in.; the lode is hard quartz, with spots of yellow ore. Having seen enough of the lode in this direction to judge of its size and regularity, we feel no inducement to do more at present; the line of level driven will be useful for winzes and ventilation to

No. 18.—Having carefully surveyed this mine, and the sett generally, I beg to briefly report thereon. The extent of this property is very considerable, being about one mile and a half from east to west, and upwards of two and a half miles from north to south. The lease is from the Earl of Morley, at one-fiftieth dues, and for a term of twenty-nine years. The transit of the ores to the place of shipment, and of materials thereon to the mine, will be unusually cheap by the Plymouth and Dartmoor Railway, which passes through the western portion of this sett. There are several lodes known to pass through this sett, but to one of them it is that I have more particularly directed attention. This lode runs in a direction easterly and westerly, and is exposed on both sides of the road, and about 200 fms. from the Plymouth and Dartmoor Railway. It has been much improved on pursuit of the mine. The last 30 fms. have produced some good silver-lead ore, and the lode in the present and (which is only about 12 fms. deep) will lay well for working. Another most important feature, also, is that at about 50 fathoms further east this lode is again opened on at surface, and then, further eastward still, by descending pits, for a distance in all of about 300 fms., and has been found to be large and exceedingly promising, composed chiefly of very fine gossan, with mundaic quartz, and a pel, of highly congeal character. There is also another lode, or may be branches, about 26 fms. to the south of the main lode, and of a much coarser character, only about 10 fms. deep, and which has been found to be equal by assays to 144 in 200 of lead, and 102 ccs. of silver to the ton of ore, has been taken therefrom; these lodes being composed of the finest gossan, sulphurous mundaic quartz, and rich silver-lead ore, and the different samples referred to yielding so large a proportion of silver, are cir-

After describing the various workings, the report thus concludes :—



## KINGSETT AND BEDFORD MINE.

Sir,—Having in your last week's paper advertised a letter on the subject of this mine, we now beg to state that, had access to the books and memoranda been afforded to us then, as it since has been, by Mr. Vatcher, the purser, such a letter would not have been written by us. In consequence of this circumstance, the subject is under consideration by two respectable parties, for the purpose of adjusting any misunderstanding or difference that may exist.

W. HARDING, Lieut.-Col. Wm. Ash.  
J. FOLETT. THOM. STINGER.  
CHARLES K. WEBB. JOHN FULFORD, Capt. R.N.

Exeter, December 4.

## LINARES MINING ASSOCIATION.

Sir,—As a shareholder in this company, I confess myself startled at the proposition of the directors to erect smelting-works at these mines. Those who are acquainted with the lead mines in this country must be aware that not even at the Lisburne, or at the Goginan Mines (although at both places raising 10 times the amount of ore that we raise at Linares), is such a thing attempted, although it has been necessary, in both those cases, to construct roads for the carriage of the ore to the point of shipment. The smelting establishments in this country are never combined with the mining establishments, and the operation is one requiring very great care and nicety of management; besides it is, for obvious reasons, generally considered better to carry the ore to the fuel than to carry fuel to the ore, and in our case the Linares Mines are situated some 70 or 80 miles from any known coal-fields; whilst even at that limited distance the coal is not at present worked, so that I am at a loss to understand how the directors can expect to gain "from 2000l. to 3000l. per annum" by the saving in the expense of carriage. In the report, published in your last week's paper, something is said about 200l. being required for a supply of fuel. Surely, it cannot have escaped the observation of our directors, that there is no fuel in the neighbourhood of the mines. I cannot say I very much like the way in which our shares are, at one fell swoop, reduced in value from 3l. to 80s. per share.—A SHAREHOLDER: Dec. 4.

## MINING NOTABILLIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

**CARBYNOS.**—This mine is situated on the north bank of the River Rheidol, about seven miles east of Aberystwyth, and has been worked by means of adit levels, a little below the bed of the river, by hand-pumps. The ore is very rich for silver, and, from the hardness of it, must have been very expensive for breaking down with hammers. This will now be altered, as it is intended to erect a water-wheel and crushing-mill, which will be powerful enough to draw the water as well as to crush. The lode has been proved to be left standing to the north, which is now being taken down, and yields more than  $\frac{1}{2}$  ton per ft.

**GELLIERHIREN (silver-lead).**—This mine is situated on the north bank of the River Rheidol, in Cardiganshire. This old mine has been worked 15 fms. below an adit driven to it by Sir Thomas Bunsall, and the bottoms have, in modern days, been proved to be left in good ore. A new adit, at an expense of 1500l., has now been carried up to within a month's driving of the ore part of the lode. Some spots of ore are coming into the end in driving into the ore under the old mine, and there is a back of 25 fms. up to the old mine.

**EAST BALLEWIDEN (tin).** This mine is situated in the parish of Sancered, near Penzance, Cornwall, in one of the best tin localities in the west of England. The mine is divided into 1024 shares, and is worked on the Cost-book Principle. Adjacent to the sett are the well-known dividend-paying mines, the Ballewidens, the Ding Dong, and the Penzance Consols—the first-named mine having produced no less than 250,000l. worth of tin during the last nine years; whilst the capabilities of the latter as a tin mine are too well known to need description. In a report of an inspection, recently made by Capt. Carthew, the managing agent at Ballewidens, and other gentlemen, a most favourable judgment is given of the mine, which is pronounced a most valuable mining property. The "Rose lode" is stated to be 70 fathoms in length, intersecting not less than six other tin lodes, which may be rendered very productive. Another lode, called the "Flat lode," is also highly spoken of—it is described as bringing into contact with other lodes, at which junctions it is believed large deposits of tin will be found. The supply of water is available for every purpose—having a fall of 40 ft. The report of Capt. Mitchell is, likewise, highly satisfactory, as he states that "he never saw a place so promising for making a lasting mine as this." It is estimated that between 1000l. or 1200l. will be required to erect a water-wheel to drain the mine, and carry out all the necessary operations; and, within 12 months, it is confidently expected that the shareholders will have a handsome return for the capital invested.

**WHEAL GUSKIS (St. Hilary, Cornwall).** on the Wheal Friendship lode, and about half a mile to the east of it.—The Wheal Guskis has been worked by old parties more than a century since, by means of an adit level driven in by the side of the hill from the village of Relubus, and about 30 feet above high-water mark. This adit has lately been cleared by the present company, and it is found that the lode has been worked over the adit to the surface, and as deep below as the old parties were permitted to go with the water they had to contend with. From the arches left to stand in places for the support of the ground, some very rich tin ore has been broken and sold by the present workers, and it is proved beyond doubt that, by the erection of a small steam-engine to sink below the present bottoms, immediate profits could be made. About half a mile below this adit, and to the north of it, 20 years since an adit was cleared into some lodes, and found in precisely the same state as Wheal Guskis now stands. Since that period 300,000l. worth of copper and tin has been raised therefrom, and left great profits to the shareholders. Again, half a mile to the south of the adit, there was an adit level driven, and the lode found in a similar state, with copper and tin ore have been returned to the extent of from 300,000l. to 400,000l., at immense profits to the shareholders. The first of these was called Wheal Virgin, and the last Croft Guthrie, Retalack and Halamaning, a part of the latter mine being in Wheal Guskis. At Wheal Friendship also copper and tin ore have been returned at different intervals, amounting to nearly half a million of money. The mine is also situated near Wheal Lewis, now paying profits to the extent of about 6000l. per annum; and, in fact, all the mines in the neighbourhood, which have been worked by old parties in the manner that Wheal Guskis has, have proved, without an exception, eminently remunerative to parties who have invested capital in them.

**THE MILWA MINES** came into possession of the present body of adventurers in December, 1848.—They are very extensive, with three large steam-engines for pumping, with winding and crushing engine, equal together to 450-horse power. Operations were immediately set afoot for a full, fair, and effectual working of the mine, by sinking new shafts, clearing others, driving, &c., in doing which discoveries were made above the adit, yielding, from January last year to the end of October last, 10,000l. worth of rich lead ore, making a profit on the opening and working the ore ground of 5000l., which sum has been expended in further laying open the ground, and in preparations for the effectual drainage of the mines, which it is expected will be completed within three months from the present time, when the ore ground discovered by such trials above adit, and now laid open to the present level of the water, will be worked. It has, we learn, been determined on putting the engines to work upon the 1st of May next, to effect which, however, a further outlay of from 1500l. to 2000l. will be required, a further call to such extent being made. The mines are under the management of Capt. Abasalom Francis, and in the nine years prior to 1838, divided a profit of 128,600l. working three veins only, but which were lost at that time by the breakage of pitwork. Since the resumption of operations, many new lodes, by cross-cuts and shafts, have been laid open, and work done whereby at least nine or ten lodes may be explored, requiring only the engines to go to work. The company is confined to 100 shares, and may, therefore, be considered a strictly private one, while we should be glad to avail ourselves of information from time to time beyond that conveyed by the ticketing papers. The time, however, we think, is fast approaching when it will be admitted that information generally diffused best serves the interests of all parties, whether those interested, or others who might feel disposed to embark in mining enterprise, of which we may say, with the evidence before us, this would appear to be a fair adventure. The last sale of ore we observe was at 12l. 8s. per ton, being the highest price obtained at the Holywell ticketing.

**GREAT WHEAL MARTHA (Stoke Climsland).**—This mine is again being put to work, and I have no doubt with success, as both ends in the 40 (bottoms) showed every indication, when abandoned, of turning out profitable. Twenty fathoms north of the present engine-shaft the Lameroo lode, now producing such rich ore, will be cut. The present company, I understand, will drive north from the adit, which is 12 fathoms deep, and cut this lode, and will also be able to cut it in the 40 fathom level, when the necessary steam-power is erected for working the water.

**WHEAL ARTHUR (Calstock).**—I have just seen some splendid stones of ore from the deep adit level west of the Old Hundred shaft, which is of first-rate quality. I visited the mine on Friday last, and am of opinion this will prove a most profitable investment.

Two of the lead mines in the Caldbec Fells, Shropshire, have been recently re-opened with every prospect of success, particularly the Roughtengill Mine, which is being worked, in driving new levels, &c., in a spirited manner by a private party, and producing more than sufficient ore to pay its cost.

**GREAT WHEAL ALFRED.**—Several parts of Hayle and Copper House were placarded on Wednesday with notices, that a survey will be held at this mine on Monday next, for the purpose of digging the foundation of an engine-house, and of setting the carriage of various materials from the Hayle wharfs to the mine. On its announcement the bells commenced ringing merry peals, and in the evening tar barrels were lighted on the tops of the posts on each side of the wharf, leading from Hayle to Copper House. A large concourse of people assembled, all breathing fervent wishes that the spirited adventurers may be speedily remunerated for their outlay. It is 25 years since this mine

was last worked. The powerful engine has been contracted for by Messrs Harvey and Co.

**MINING IN THE ST. AGNES DISTRICT.**—A discovery has recently been made at Wheal Betsy Mine, in this parish, under the management of Capt. James Gripe, and also at East Wheal Leisure Mine, in Perranzabuloe. In Great St. George Mines there are some excellent pitches and ends, and after the lengthened "draws" they have experienced, from time to time, the value is enhanced by perseverance. Many thousands of pounds have been gained since the working of the western part of the mine, enriching the adventurers and employing the labourers. It is hoped, indeed, that the days of depression in this district are passed. Immense gains have accrued to adventurers by speculation here, and why not again? Litigation has been a great drawback to progress, but under judicious management a different course is now adopted, and healthier feelings promoted. The appeal to law is a waste of time to mining, which truth unfortunately has been practically illustrated in many parts of Cornwall. With regard to Polberou Mines, in St. Agnes, the tin part of the mine is looking, and has been doing well; the last and preceding pay days have been the best since the re-working of the mines under the Messrs. Taylor. The Friendly and Wheal Rock Mines are looking much as usual; and they improve rapidly as they advance westward. The base of the Beacon Hill is generally very productive of minerals.

## MINING APPOINTMENTS DURING THE WEEK.

- Wheal Seton account, on the mine; Par Consols sampling.
- Trevelyan account, on the mine; Grampian account, on the mine.
- United and other mines sampling.
- Ticketing at Redruth, Carn Breva, and other mines.
- Stray Park account, on the mine; pay at West Caradon and Gonamena; setting at North Pool.
- Pay at United Mines, Phoenix, Alfred Consols, Cook's Kitchen, West Treasury.
- Conduff account, on the mine; Fowey Consols sampling.
- East Pool account, on the mine.

**VALUABLE DISCOVERY IN MONMOUTHSHIRE.**—We are happy to learn that after four years' labour, the Messrs. Price, of Cwmilly, have succeeded in discovering some very rich veins of steam-coal, of unusual thickness and fine quality. From the statements of mineral agents, it appears that, during the sinking operations, it was ascertained the coal and iron measures of Cwmilly were not inferior to any in the mineral districts; and, as a proof, it is mentioned that four workable seams had been passed through, and the last entered formed one working, with 13 ft. of solid coal; while there remained several more veins within reach, and the ironstone was equally abundant.

**EXTENSION OF THE DOWLAS WORKS.**—On Saturday morning last two additional rolling-mills were formally started, in the presence of Sir John, Lady, Charlotte, Miss Guest, and about 1000 spectators, many of whom were strangers from the neighbouring works and their localities. There are two other mills in course of construction beneath the same roof, which when finished, together with those already opened, will present as fine a range of mills as any in South Wales, no expense having been spared in machinery or building. The whole erections are under the superintendence of Mr. D. Williams, mechanic, directed by W. Wood, Esq., manager. Mr. R. Davies, master-roller, fixed and adjusted the rolls, and rolled the first bar, which was finished as perfectly as if the mills had been in operation for 12 months.—*Swansea Herald.*

**RAILWAY TRAFFIC.**—The gross traffic since the 30th of June amounts, on 5892 miles, to 5,730,124l., which indicates an average of 972l. 10s. 6d. per mile for the period mentioned. The same number of weeks in a like period last year showed a traffic of 4,973,105l., which, on 4825 miles, was equal to an average of 1030l. 13s. 10d. per mile. The gross traffic for the present week, on 6005 miles, amounts to 221,767l. 0s. 3d., showing an average of 36l. 18s. 7d. per mile. Last year, the corresponding week, on 5084 miles, produced 192,777l., or 37l. 18s. 4d. per mile.—*Railway Times.*

**LONDON AND BIRMINGHAM EXTENSION RAILWAY.**—Yesterday a claim of 10,973l. for engineering was brought before Master Blunt. Mr. Manning, for Mr. Croysdill, the official manager, contended that as the defectiveness of the plans and sections was the cause of the company being thrown out on standing orders, the claimants were only entitled to remuneration *quantum meruit*. After considerable discussion, it was resolved to refer the claim to arbitration.

**EXTENSIVE FAILURE OF A SHARE-DEALER.**—Mr. Jas. S. Tripp, the share-dealer, of Lombard-street, underwent his last examination at the Court of Bankruptcy, yesterday. The balance-sheet extended from the 1st July, 1845, to the 21st October last, the date of the petition, and contained some heavy items, especially on the debtor side. The bankrupt owed to unsecured creditors, 33,505l.; to meet this the assets were put down at 21l. in good debts, and 41l. 17s. doubtful. A further sum of 2688l. was due to creditors holding security, the property thus held being estimated at 2383l., and the liabilities were 959l. The bankrupt began his statement with a capital of 11,062l. in 1845; his profits had been 3356l. on shares, and 1526l. on commission. The trade expenses were 3356l.; interest, 500l.; law costs, 555l.; house and personal expenses, 4095l.; losses on shares, from July to November, 1845, 60,478l.; on Consols, 1570l.; on bad debts, 879l.; on railway circulars, 156l.; total losses, 63,104l. Mr. Lawrence supported the bankrupt. He observed that the result of the trading had been very disastrous, but there were mitigating circumstances which would be brought before the court in proper time. He had been a victim of the panic in 1845; and being a middle man, a share dealer, all the losses had been thrown upon him. There was no doubt that the capital of the bankrupt was *bona fide*. Mr. Linklater, for the assignees, offered no opposition, and the bankrupt passed.

## LATEST CURRENT PRICES OF METALS.

LONDON, DECEMBER 6, 1850.

| ENGLISH IRON.  | per ton.       | per lb. |
|--|----------------|---------|
| Bar, bolt, square, London  | 25 6-7 6       | 10 0 0  |
| Nail rods  | 6 0-6 10       | 8 0 0   |
| Hoops  | 7 0-7 10       | 8 0 0   |
| Sheets (single)  | 7 12-8 5       | 8 0 0   |
| Bars at Cardiff & Newport  | 4 10 0         | 8 0 0   |
| Refined metal, at Swansea  | 3 0-3 15       | 8 0 0   |
| Refined anthracite   | 3 10 0         | 8 0 0   |
| Pigs in Wales  | 3 0-3 5        | 8 0 0   |
| Do. do. forge  | 2 5-2 10       | 8 0 0   |
| Do. No. 1, Clyde, net cash   | 2 3-2 4        | 8 0 0   |
| Blewitt's Patent Refined Iron for bars, rails, &c., free on board at Newport | 3 10 0         | 8 0 0   |
| Do. do. for the plates, boiler plates, &c., ditto                            | 4 10 0         | 8 0 0   |
| Stirling's Patent in Glasgow   | 2 15 0         | 8 0 0   |
| Tonguehead Pigs in Wales   | 3 0-3 15       | 8 0 0   |
| Staffordshire Bars, at the works   | 5 5-6 0        | 8 0 0   |
| Rails  | 4 15-5 0       | 8 0 0   |
| Chairs (Clyde)   | 4 0 0          | 8 0 0   |
| FOREIGN IRON.  | per ton.       | per lb. |
| Swedish  | 11 10-12 0     | 8 0 0   |
| CAND   | 17 10 0        | 8 0 0   |
| PSI  | —              | 8 0 0   |
| Gouffier   | —              | 8 0 0   |
| Archangel  | —              | 8 0 0   |
| FOREIGN STEEL.   | per ton.       | per lb. |
| Swedish keg  | 14 10-14 15    | 8 0 0   |
| Ditto faggot   | 15 0-15 5      | 8 0 0   |
| ENGLISH COPPER.  | per ton.       | per lb. |
| Sheets, sheathing, & bolts, p. lb.   | 0 0 5          | 8 0 0   |
| Throat cake  | per ton 81 0 0 | 8 0 0   |
| per lb.  | 81 0 0         | 8 0 0   |

The WELSH IRON market maintains its upward tendency, and prices are quoted firmly 2s. 6d. above last week's rates. Very large orders for rails continue to be taken, and the trade looks more healthy than it has done for months. Bars are readily fetching 4l. 15s. free on board in Wales; while some makers demand 5l. per ton—at which price some large orders for rails are in the market.

**STAFFORDSHIRE IRON** also evinces a disposition to advance above the current rates: from the sudden influx of orders, the makers are not anxious to sell further quantities at present, unless at advanced prices, large orders having been offered and refused. **SCOTCH PIGS.**—Notwithstanding the advance in bars, pigs have receded in price fully 6d. per ton, and the market closed quiet at 43s. 6d. cash, against warrants, 45s. 9d. against scrip. Upwards of 30,000 tons of scrip are now in course of being removed into stores. The present stock of pigs is estimated at 270,000 tons.

**SPLETTER** has undergone a slight reduction in price. At the early part of the week about 200 tons on the spot were sold at 16l. 7s. 6d., and 150 tons at 16l. 6s. over-ride. The market is quiet, with a stock on the 1st inst. of 5476 tons.

**COPPER** is steady at the quotations. Common BRITISH TIN is without much inquiry, and the market, consequently, easy: 530 loads of Banca have been sold at 7s.; the article is, however, in limited request. The stock of E. I. consists of 945 tons.

**LEAD** is still on the advance, and holders are very firm for both English and Spanish. TIN PLATES without alteration: the demand continues unabated, and holders are firm.

**GLASGOW, Dec. 5.**—Our market for Scotch pig-iron was rather flat early in the week owing to weak holders pressing scrip on the market, in preference to incurring the expense of storing; as, however, the shipments and consumption are large, a large quantity has been taken for immediate delivery, and the market is firm at 44s. per ton, cash, for mixed No. good brands, warrants free on board here. The makers of manufactured iron are asking higher rates, as the demand is exceedingly good.

By the overland mail we have advices of the metal markets at Bombay and Calcutta to the 1st November. From Bombay, the prices of most descriptions of metals have fallen since last report, and there has been, at the same time, a considerable number of transactions. The demand for British bar iron continues steady. Swedish iron is now rather dull, and but little inquiry for nail rod, square and round, sheet and hoop. A large quantity of copper has been imported by the ship *Stag* from Australia, and prices have further declined for nearly all descriptions, especially South American. Lead, both pig and sheet is dull, the price of the former having given way. Spleter is firm.—From Calcutta, copper has obtained an advance of 4 annas for sheathing, and 5 annas for tile.

**HULL, THURSDAY.**—Messrs. T. W. Flint and Co. state that they have had a strong demand for mining shares throughout the week. The stocks being chiefly in demand have been Treasury and Wellington, which fetch sellers at market rates. Bedford United shares are also in fair request—buyers, 4l.; sellers, 3l. 10s. Gustave continues a favourite stock—last price, 3l. For Trevelyan the demand somewhat flags; this stock has been done at 21, present price 30. West Tolgas is for the time neglected. South Tamar, 2l. 6s. 3d. to 2l. 8s. 9d. There has been some inquiry for West Providence shares. Lewis, Transack, South Wheal Trevelyan, and Gunnis Lake, would find buyers at fair rates. Some ounces have been recently invested in mining shares for Hall account.

## Current Prices of Stocks, Shares, &amp; Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

|   |                                       |
|---|---------------------------------------|
| Bank Stock, 6 per Cent., 213                  | Belgian, 41 per Cent., 89             |
| 3 per Cent. Reduced Ann., 96                  | Dutch, 21 per Cent., 66 1/2           |
| 3 per Cent. Consols Ann., 97 1/2              | Brazilian, 5 per Cent., —             |
| 3 1/2 per Cent. Ann., 98 1/2                  | Chilian, 6 per Cent., —               |
| Long Annuit., 78                              | Mexican 5 per Cent., ex Coup., 32 1/2 |
| India Stock, 10 1/2 per Cent., 371 60         | Russian, 5 per Cent., 108 1/2         |
| 3 per Cent. Con. for Acct. 11th Dec. 97 1/2   | Spanish, 5 per Cent., 18 1/2          |
| Excheq. Bills, 1000l., 1 1/4. 6 1/2 6 3/4 pm. | Ditto 3 per Cent., 39 1/2             |

**MINES.**—There is a difference perceptible in the amount of business done during the past week in dividend-paying mines, but it is rather a modification of the general demand for shares than a falling off in inquiry for the more solid descriptions of stock. It is in the nature of things that a brisk market should originate new schemes, and divide the attention of capitalists, and in no business more so than in mines. We are content that it should be so, as long as the new projects will bear the test of the strictest scrutiny by competently-qualified judges of mineral indications—a hint we merely drop for consideration before investments are made. A late discovery in the Tavistock district (considered to be next in importance to that of the Great Devon Consols) has led, we find, to the immediate and vigorous re-workings of several important mines previously abandoned, and will, no doubt, give rise to a large expenditure of capital in that locality.

In the Metal Market, lead is in improved demand, at rather firmer prices. Copper is without alteration: steady at the quotation. British tin is without much inquiry, and the market easy; a fair business doing in East India, and Banca in limited request. In tin-plates, the stock running short, a higher price may be expected. The iron market has again improved: Welsh bars have been in great demand, and large orders for rails are given at an increased price.

The tendency to an advance in silver steadily continues—the total rise being equal to 2 1/2 per cent.

The sale of copper ores at Redruth, on Thursday last, amounted to 4935 tons, producing 21,465l. 11s. 6d.

The sale of foreign ore at Swansea on Tuesday consisted of 1224 tons, and realised 19,450l. 17s. 6d. There is no other sale until the 31st.

Among the arrivals at Swansea have been 1315 tons of copper ore from Cuba, consigned to the Cobre Company.

Two parcels of ore from Linares Mining have been sold—70 tons and 40 tons, both at 11l. 12s. per ton. Ores to arrive—62 tons and 74 tons, both at 11l. 8s. per ton.

Seventy tons of lead ores from the Glengola Mine, Galway, realised 11l. 5s. per ton; 6 tons from Dyrwynog, 10l. 18s. 6d. per ton; and 7 tons from Rhoswydol, 11l. 10s. 6d. per ton.

Three parcels of lead ore from the Lisburne Mines have been sold at Aberystwyth—viz.: East Logylas, 55 tons, at 15l. 12s. 6d. per ton; ditto, 55 tons, at 15l. 15s. 6d.; and Frongoch, 80 tons, at 11l. 8s. 6d.

The East Wheal Rose sale of lead ore was—34 tons at 16l. 9s. 6d., 26 tons at 15l. 5s., 17 tons at 15l., and 4 tons at 8l. 3s. 6d. per ton.

The East Tamar lead ore, 67 tons, sold for 14l. per ton.

A private inspection of Alfred Consols Mine by Mr. S. H. Thomas, superintendent of the Alten Company's Mining Works in Norway, has just taken place. The report, which is given in *extenso* elsewhere, is confirmatory of the favourable opinions lately expressed of the capabilities of the mine. Mr. Thomas states that the lode is as good as has been reported—the present rich bunch of ore having been intersected at a depth of 55 fms.; while in the winze sinking under the 60, he says there is a most splendid and improving lode. In the 70 fm. level there is described to be a "large, rich, and regular lode," and in No. 1 winze, in this level, the lode is "very rich and productive." He also expresses his firm opinion that, when the 80 fathom level is further advanced easterly, a bed of ore will be intersected as rich as in the 60 and 70, which must tend greatly to enhance the value of the mine. The usual report states that the lode in No. 2 winze is 4 ft. wide, with every prospect of soon becoming wider, its worth for copper ore being estimated at 100l. per fm. Another lode, in the 70 fm. level, is stated at 120l., and in the winze under the 60 fm. level east, at 140l. per fm., being full 7 ft. wide, and its produce calculated at 20 tons per fathom.

The Holmbush report expresses very sanguine expectations of future success, founded on the operations now being prosecuted, and others in contemplation. The mine agent states that at no period within the last five years has it afforded greater promise of becoming a dividend-paying one than at present. Last week 164 tons of copper ores were sampled at Calstock, and a parcel of lead will be sampled on the 10th inst.

The Tamar report states that 85 tons of rich silver-lead ore will be sampled in a few days.

At Wheal Margaret an improvement is reported in the 100 fm. level—the lode being 3 ft. wide, and estimated at 60l. to 70l. per fm.

At the East Daren, in the 30 fm. level east, the lode is about 3 ft. wide, yielding from 25 to 30 cwt. of silver-lead ore per fm. In the 10 fm. level 24 fms. of ore ground has been gone through, averaging 2 tons per fm.

At Cwm Erfin, the 30 fm. level east continues to produce 2 tons of lead ore per fm.; the rise over the level yielding 1 1/2 ton per fm.

At Bat Holes, the end in shallow adit is stated to be worth 10l. per fm.; the north stopes 9l., and south stopes 7l. per fm. The report is favourable, the stopes in back of the same level being worth 20l. per fm. Fifty tons of ore are just ready for sampling.

The new lode at East Wheal Leisure is 6 ft. wide, and the estimated produce 5 tons per fm.

At Wheal Hamlyn, they are driving on the caunter lode, which is producing unusually rich specimens of copper ore, with spots of tin in the lode. At Rannaford Coombe, things are assuming a more satisfactory aspect, and though there are still some arrears of calls, the balance till lately due for the engine has been paid by the leading shareholders on behalf of the company. The works will now be prosecuted with the activity requisite to place their affairs in a healthy position.

At the meeting of the General Mining Company for Ireland, held in Dublin, a very gratifying report was read; and the success of the company's operations was further demonstrated by the declaration of a dividend of 10 per cent. out of the profits for the present half-year. This is the more satisfactory, as the company commenced operations in 1846, at a period of unprecedented difficulty, distress, and famine; and, by excellent management, were enabled to overcome every obstacle. As many as 700 persons find employment in the vicinity of the mines, owing to the existence of this company, who are fairly entitled to be held up as an example of perseverance and judicious enterprise.

The Wheal Bassett Mine account, on the 3d inst., showed—Labour cost for September and October, 2009l. 3s. 11d.; merchants' bills, 868l. 6s. 11d.—=2877l. 10s. 10d.—Copper ore sold, 5738l. 6s. 4d.; tin ores, 498l. 6s. 1d. (less dues, 415l. 15s. 5d.)=5820l. 17s.—showing profit of 2943l. 6s. 2d.; add balance in hand end of August, 107l. 3s. 8d.=3050l. 9s. 10d.—By dividend of 10l. per share, 2560l.—leaves a balance to the next account of 490l. 9s. 10d. The report is very satisfactory, and stated that the stopes generally are producing ore equal to expectation, and quite as good as was anticipated whilst driving the levels.

At the South Tolgas meeting a dividend of 2l. 10s. per share was declared. The accounts showed—By sales of ores (less dues), 2022l. 5s. 7d.—Mine cost for September and October, 1284l. 12s. 3d.: showing profit of 737l. 13s. 4d.; add balance from last account, 110l. 13s. 4d.=848l. 6s. 8d.; paid on account of new engine, 121l.—Dividend of 2l. 10s. per share (640l.), 761l.; leaving balance now in hand, 87l. 6s. 8d. The mine is reported to be looking very well: the 54 and 42 fm. levels are in good ore ground, and the 32 appears to be entering the same run of ore.

A dividend of 10s. per share was declared by the Lewis Mines, on Wednesday, the 4th inst.

The Trevelyan Mine account, on the 30th Nov., showed—Labour cost for September and October, 1159l. 8s. 7d.; merchants' bills, 521l. 19s. 9d.—=1681l. 8s. 4d.—By amount of copper and tin ores, sold Aug. and Oct. (less lords' dues, 654l. 11s. 11d.), 1246l. 8s. 6d.—By sundry credits, 437l. 18s.—=1684l. 6s. 6d.—showing profit of 2l. 18s. 2d.; add balance in hand, end of Aug., 364l. 15s. 4d.—leaving balance now in hand, 367l. 13s. 6d.

The Trevelyan Mine account, on the 3d inst., showed—Labour cost for Sept. and Oct., 312l. 5s. 9d.; merchants' bills, 85l. 14s. 4d.—=398l. 0s. 1d.—By copper ores sold, 26th Sept. (less 1-15th lords' dues, 29l. 7s. 8d.), 409l. 8s. 1d.—showing profit, 11l. 8s.; add balance in hand, last account, 324l. 17s. 3d.—leaves balance to next account, 336l. 5s. 3d. The prospects of this mine are improved of late in a south lode.

At the quarterly meeting of Lelant Consols, a call of 4l. per share was made. The accounts showed—Balance due to the pursers end of June, 741l. 15s. 6d.; mine cost for July, August, and September, 842l. 4s. 9d.,



merchants' bills, 3641 9s.—19661 9s. 3d.—By call of 42 per share, 10242, tin sold, 8971 12s. 3d.; for stamping, 107 3s. 3d.—showing loss, 5361 13s. 9d.

At the Wheal Trefusis meeting, on Tuesday, the accounts for September and October were presented, showing—Balance from the last account, 4204 11s. 2d.; costs and merchants' bills, 2711 13s. 8d.—6921 4s. 10d.—By ores sold (less dues), 771 7s. 8d.; calls received, 5041—5811 7s. 8d.—leaving balance against adventurers of 1101 17s. 2d.—A call of 10s. per share was made.

At the East Tywarthayle meeting, on Monday, the accounts were passed and a call of 3s. per share was made. The engine will be at work in about a month; and, after the water is forked, it is expected that ore will be raised sufficient to meet the expenses of the mine. The engine is erected on a very promising lode, and the adventurers are fully satisfied with their prospects.

At the Wheal Susan meeting, the accounts presented a balance against the adventurers of 4961 14s. 7d. The mine cost and materials, including balance from last account, amounted to 7991 11s. 7d. By last call of 5s. 2501; sale of tin, 221 7s. 7d., leaving balance as stated. A further call of 10s. per share was made. By the report read to the meeting, we perceive that the total outlay has been 10501, of which 8501 has been for machinery. Several levels on the tin and copper lodes are expected to be shortly opened, and the fullest anticipations of a good return for capital invested are entertained by the agents.

A meeting of Wheal Langmaid adventurers was held at Tamerton, on Monday. The accounts were passed, and the captain's report read. It was resolved to continue to drive the 15 ft. level north, in which there is a kindly lode, as also to provide a water-wheel and pumps, to sink the shaft to the proper depth to make a trial at another level; this, it is expected, can be done in about three months' time, and a call of 3s. per share was made to defray its cost. If the present prospects continue, a steam-engine will be purchased, for the further development of the mine.

At Wheal Violet meeting, the balance due to pursers was 2361 16s. 6d., to meet which, and to prosecute further operations in the mine, a call of 21 10s. per share was made. Capt. Dale's report was, on the whole, satisfactory, and gave reason to believe that abundance of mineral would be found when the lodes were cut to the 20 ft. level. The expenditure for machinery had been heavy, but much of it was of a kind that would not occur again.

The reports read at the Boringdon Park meeting—two from the agents of Wheal Trelawny, and one by the agent at Wheal Trehane—are such as may justly inspire the shareholders with the hope of good returns from the mine. Capt. Kemps says that, from the extent of the sett, and the number of lodes comprised within its limits, the mine offers such inducements as are not often met with. The assays of the ores also give productive results, and the agent of Trehane concludes his report by saying that the speculation is more than ordinarily tempting, and may be termed a sure investment, rather than an adventure. A call of 10s. per share was made, and Mr. Hitchens was appointed superintendent of the mine.

At South Wheal Josiah meeting, the report from Capt. Hambly stated that operations in several portions of the workings had been suspended, on account of the water. The accounts showed a balance in favour of the company, supposing all calls to be paid, of 411 4s. 8d.

At the Kingzett and Bedford meeting last week, a call of 5s. per share was made, and a brief report from Capt. Seymour, expressive of his conviction that the mine would, in a very short time, pay cost and yield a profit, was read. We are glad to perceive that the differences between some of the shareholders, and their pursers, are in a fair way of arrangement, thus removing a serious obstacle to the prosperity of the mine.

At the Trowan Consols meeting, at Hayle, on Tuesday, the accounts showed—By call of 10s. per share, 30th August, 751 10s.; tin sold (less lord's dues), 3901 12s. 5d.—4661 2s. 5d.—Book in debt end of June, 841 9s. 6d.; labour cost for July, August, and September, 2661 18s. 5d.; doctor and club, 41 10s.; merchants' bills, 1031 15s. 2d.—leaving balance in favour of mine, 61 9s. 4d.—Mr. J. M. Kernick was engaged at 21 2s. per month as clerk, and to assist the captain, and the captain's salary was increased to 61 6s.

At the Great Sheba Consols meeting there was a balance in hand of 2501 6s. 4d. The calls paid on shares had been 10401; and a fresh call of 21 per share was made, to meet the payment of 8651 on a contract just entered into for machinery. The meeting was held on the mine, so that the shareholders had full opportunity of inspecting the operations. Capt. Spargo's report states the produce of the lodes to be extraordinary, and active proceedings speedily contemplated.

At the East Wheal Russell meeting, at which Mr. J. H. Murchison presided, being the first yet held, very sanguine anticipations were expressed as to the productive capabilities of the sett. A managing committee was formed, and Mr. Josiah Hitchens was appointed superintendent. Should the favourable opinions expressed by Capt. Richards, of the Devon Great Consols, and Capt. J. Carpenter, be verified, the shareholders will have reason to congratulate themselves on their investment of capital in this mine.

The accounts presented at the West Wheal Seton meeting showed—Mine cost and merchants' bills for Sept. and Oct., 8431 2s. 8d. The ores sold, amount of last call, and balance of last account, still leave a balance against adventurers, 541 18s. 4d. A further call of 21 per share was made.

At a special meeting of Low's Patent Copper Company, on Friday, Mr. W. H. Lascere was unanimously chosen as director, in the room of Mr. Edward Hunt, resigned.

At the special general meeting of the Company of Copper Miners in England, much discussion on the present position of the company's affairs took place, and the report of the shareholders' committee was ultimately adopted. It appears that the debenture holders intend making an application to Parliament. The next meeting will take place on the 2d of Jan.

Shares in the following mines have changed hands during the past week:—Trefusis, West Alfred Consols, Bedford United, East Wheal Leisure, West Tolgus, Tremayne, West Providence, Merlyn, South Tamar, Tincroft, Trevisey, Trannack and Bovean, Wheel Vanton, Wellington, Devon Great Consols, Black Craig, Kirkcudbright, Alfred Consols, West Caradon, East Wheal Reeth, South Caradon, Wheal Arthur, Wheal Tom, Daren, Cwm Erfin, Wheal Franco, Calstock United, Wheal Susan, Craig-y-Mwyn, Wheal Harriet, Low's Patent Copper Company, East Wheal Frances, Bryntal, Bedford United, Comfort, Cook's Kitchen, Gustavus, Tamar Consols, Trelawny, Great Sheba Consols, Cefn Bruno, Wheal Russell, Langmaid, Wheel Vanton, Devon and Courtenay, Drake Walls, Penseance Consols, Keswick, East Gunnis Lake, West Virgin, Mill Pool.

In foreign shares more activity has been observable, and business has been done in the following mines:—United Mexican, at a slight advance; Australian, General Mining, Cobro, Worthing (South Australia), and British Australasian.

Despatches have been received by the Worthing Mining Association, dated the 10th and 12th of August, giving a lengthened account of the operations at the mines. In the first of these Capt. Phillips states that in the Water-wheel shaft, branches have been met with containing yellow sulphuret, the inference he draws being that the lode is near. In the middle gully shaft operations have been suspended until an engine is at work, and in the south end measures had been taken to test the size and regularity of the lode. Other steps also were taken to ascertain the best spot for placing the engine, a course strongly advised by Capt. Phillips, without awaiting the trial of horse-power. By the letter of August 12, we learn that much obstruction to the works was occasioned by the water, which had compelled the suspension of the sinking in gully shaft; the result, however, of the whim being kept working was, that two of the winzes had been partially drained. When the engines are brought from port, they will probably be erected on the gully shaft, by which it was expected that the ground would be drained north and south of the lodes. In the south end the ground and lode are hard; in the latter are mingled minute spots of ore and mudic. The report of the committee of management in the colony, which, with the other reports, will be found in another column, describes the operations now going on in water-wheel shaft, and refers to a lode met with in one of the levels, which was not considered the true copper lode on the surface. The latter had undergone an examination, to ascertain its course and distance from the shaft. The committee recapitulate the leading works in progress, the chief points of which are given in the reports of Capt. Phillips and Richards. Hodgkinson's winze was let on tribute. At north gossan shaft the surface indications are very good, and the report generally, without much in the shape of positive results, shows that the operations were being actively prosecuted, and with a fair prospect of ultimate success.

The Linares report contains no feature of peculiar interest. In Wilson's shaft the lode had been found to improve, and was worth 5 tons to a fm. In San Antonio winze there are good stones of lead, but the ground is rather irregular and hard. The lode in the 31 ft. level continues good and we observe it stated that the new pitch under the 45 ft. level, east of

San Pablo, is wrought on a very productive lode, worth not less than 12 tons per fathom. The total ore in stock, including that at Linares, Seville, Baylen, Malaga, and on shipboard, amounts to 590 tons 15 cwt.

## LEAD ORES.

TICKETINGS FOR 246 TONS OF LEAD ORE FROM THE LINARES MINES.

Sold in London on the 4th December.

| Biddings.             | Per Belmont. | Per Fero. | Per Hercules. | p. Maxima |
|-----------------------|--------------|-----------|---------------|-----------|
| Sims, Williams, & Co. | 11 12 0      | 11 12 0   | 11 12 0       | 11 12 0   |
| Clementson & Co.      | 11 12 0      | 11 12 0   | 11 12 0       | 11 12 0   |
| Mather & Co.          | 10 0 0       | 10 0 0    | 10 0 0        | 10 0 0    |
| Tamar Company.        | 9 18 0       | 9 18 0    | 9 18 0        | 10 1 6    |

Sold at Aberystwyth on the 2nd December.

| Mines.        | Tons. | Prod.   | Price.  | Mines.                | Tons. | Prod.   | Price.  |
|---------------|-------|---------|---------|-----------------------|-------|---------|---------|
| East Loggias  | 55    | 11 12 0 | 11 12 0 | Patheir Smelting Co.  | 55    | 11 12 0 | 11 12 0 |
| ditto         | 55    | 11 12 0 | 11 12 0 | ditto                 | 55    | 11 12 0 | 11 12 0 |
| Frangoch      | 80    | 11 12 0 | 11 12 0 | ditto                 | 80    | 11 12 0 | 11 12 0 |
| Bwlch Consols | 40    | 15 7 6  | 15 7 6  | Newton, Keates, & Co. | 40    | 15 7 6  | 15 7 6  |

Sold at the Mine on the 2nd December.

| Mines.                 | Tons. | Prod.   | Price.  | Mines.                  | Tons. | Prod.   | Price.  |
|------------------------|-------|---------|---------|-------------------------|-------|---------|---------|
| Glengola (near Galway) | 70    | 11 12 0 | 11 12 0 | J. Taylor & Son, London | 70    | 11 12 0 | 11 12 0 |

Ticketings at Baginbun on the 5th December.

| Mines.     | Tons. | Prod.   | Price.  | Mines.                | Tons. | Prod.   | Price.  |
|------------|-------|---------|---------|-----------------------|-------|---------|---------|
| Eagle Rock | 27    | 10 15 0 | 10 15 0 | Walker, Parker, & Co. | 27    | 10 15 0 | 10 15 0 |
| Drygwm     | 6     | 10 15 0 | 10 15 0 | ditto                 | 6     | 10 15 0 | 10 15 0 |
| Rhosyrdol  | 7     | 11 10 0 | 11 10 0 | ditto                 | 7     | 11 10 0 | 11 10 0 |

Sold at the Mine.

| Mines.          | Tons. | Prod.  | Price. | Mines.                | Tons. | Prod.  | Price. |
|-----------------|-------|--------|--------|-----------------------|-------|--------|--------|
| East Wheal Rose | 34    | 11 9 0 | 11 9 0 | Sims, Williams, & Co. | 34    | 11 9 0 | 11 9 0 |
| ditto           | 26    | 11 9 0 | 11 9 0 | R. Mitchell & Son.    | 26    | 11 9 0 | 11 9 0 |
| ditto           | 17    | 11 9 0 | 11 9 0 | J. T. Trevelyan.      | 17    | 11 9 0 | 11 9 0 |
| ditto           | 4     | 8 3 6  | 8 3 6  | R. Mitchell & Son.    | 4     | 8 3 6  | 8 3 6  |

Sold in London.

| Mines.     | Tons. | Prod.  | Price. | Mines.                | Tons. | Prod.  | Price. |
|------------|-------|--------|--------|-----------------------|-------|--------|--------|
| East Tamar | 67    | 11 4 0 | 11 4 0 | Sims, Williams, & Co. | 67    | 11 4 0 | 11 4 0 |

## COPPER ORES.

Sampled November 13, and Sold at Swansea, December 3, 1850.

| Mines.   | Tons. | Prod.    | Price.   | Mines.        | Tons. | Prod.    | Price.   |
|----------|-------|----------|----------|---------------|-------|----------|----------|
| Cuba     | 90    | 12 9 6   | 12 9 6   | Coplaque      | 75    | 28 1 7   | 28 1 7   |
| ditto    | 75    | 13 9 6   | 13 9 6   | ditto         | 74    | 27 2 1   | 27 2 1   |
| ditto    | 74    | 13 9 6   | 13 9 6   | ditto         | 53    | 28 2 1   | 28 2 1   |
| ditto    | 72    | 24 19 6  | 24 19 6  | Cobro         | 101   | 12 12 13 | 12 13 6  |
| ditto    | 71    | 12 9 6   | 12 9 6   | ditto         | 86    | 10 12 10 | 10 12 10 |
| ditto    | 51    | 19 14 10 | 19 14 10 | ditto         | 53    | 24 18 18 | 24 18 6  |
| ditto    | 30    | 31 24 5  | 31 24 5  | ditto         | 15    | 18 14 8  | 18 6 6   |
| Coplaque | 78    | 25 19 18 | 25 19 18 | Sydney        | 53    | 24 19 2  | 24 19 2  |
| ditto    | 77    | 26 19 17 | 26 19 17 | Waterloo Slag | 20    | 4 2 5    | 4 2 5    |
| ditto    | 76    | 27 21 5  | 27 21 5  |               |       |          |          |

## TOTAL PRODUCE.

|               |     |          |        |     |           |
|---------------|-----|----------|--------|-----|-----------|
| Cuba          | 463 | £577 8 0 | Cobro  | 255 | £357 11 6 |
| Coplaque      | 433 | 942 2 0  | Sydney | 53  | 1012 6 0  |
| Waterloo Slag | 20  | £45 10 0 |        |     |           |

## COMPANIES BY WHOM THE ORES WERE PURCHASED.

| Mines.                    | Tons. | Amount.      | Mines. | Tons. | Amount. |
|---------------------------|-------|--------------|--------|-------|---------|
| English Copper Company    | 221   | £3456 9 0    |        |       |         |
| Greenfield and Sons       | 307   | 3474 1 6     |        |       |         |
| Sims, Williams, & Co.     | 104   | 1280 3 6     |        |       |         |
| Vivian and Sons           | 199   | 3277 8 0     |        |       |         |
| Williams, Foster, and Co. | 293   | 3574 16 6    |        |       |         |
| Schneider and Co.         | 91    | 1977 17 0    |        |       |         |
| Mason and Elkington       | 102   | 2117 2 0     |        |       |         |
| Total                     | 1224  | £19,450 17 6 |        |       |         |

There will be no sale till Tuesday, the 31st of December.

## AVERAGES.

| Produce.   | Price.  | Standard. |
|--|---------|-----------|
| British  | £12 5 6 | £108 8 0  |
| Foreign  | 16 2 0  | 86 15 0   |
| Sale   | 20 1 7  | £86 16 6  |
| Totals—British, 20; Foreign, 1204 = 1224 tons (21 cwt.). |         |           |

## AVERAGES OF LAST SALE.

| Produce.   | Price.  | Standard. |
|--|---------|-----------|
| British  | £6 15 6 | £96 19 6  |
| Foreign  | 19 10 6 | 86 1 0    |
| Sale   | 18 1 4  | £88 4 0   |
| Totals—British 806; Foreign, 1208 = 2016 tons (21 cwt.). |         |           |

## COPPER ORES.

Sampled Nov. 20, and Sold at Andrew's Hotel, Redruth, Dec. 5.

| Mines.          | Tons. | Price.  | Mines.            | Tons. | Price. |
|-----------------|-------|---------|-------------------|-------|--------|
| Tincroft        | 87    | £2 4 0  | Wheal Seton       | 45    | £3 4 0 |
| ditto           | 82    | 3 0 6   | ditto             | 43    | 4 7 6  |
| ditto           | 81    | 3 10 6  | ditto             | 41    | 4 7 6  |
| ditto           | 74    | 3 2 0   | ditto             | 37    | 2 8 0  |
| ditto           | 68    | 3 16 6  | ditto             | 26    | 1 18 0 |
| ditto           | 67    | 3 12 0  | Pendarves         | 61    | 5 1 6  |
| ditto           | 63    | 3 7 6   | Camborne Vein     | 80    | 4 4 0  |
| ditto           | 48    | 1 13 6  | ditto             | 60    | 5 5 6  |
| ditto           | 47    | 4 12 6  | ditto             | 57    | 5 5 6  |
| ditto           | 44    | 5 1 6   | ditto             | 45    | 3 13 6 |
| ditto           | 34    | 5 2 0   | ditto             | 35    | 1 19 0 |
| ditto           | 27    | 6 17 0  | Wheal Francis     | 59    | 3 12 0 |
| North Pool      | 107   | 2 9 0   | ditto             | 32    | 3 5 6  |
| ditto           | 105   | 3 16 0  | East Pool         | 99    | 3 1 0  |
| ditto           | 103   | 3 12 0  | ditto             | 55    | 5 7 0  |
| ditto           | 90    | 3 13 6  | ditto             | 50    | 3 6 0  |
| ditto           | 57    | 2 12 6  | ditto             | 42    | 3 14 6 |
| ditto           | 53    | 2 12 6  | ditto             | 39    | 3 8 6  |
| ditto           | 51    | 2 18 0  | ditto             | 30    | 0 6 6  |
| ditto           | 30    | 18 18 0 | Fowey Consols     | 99    | 6 14 0 |
| East Wh. Crofty | 117   | 6 0 0   | ditto             | 91    | 6 9 0  |
| ditto           | 102   | 5 17 6  | ditto             | 85    | 2 7 6  |
| ditto           | 55    | 0 9 0   | Condurow          | 58    | 4 12 6 |
| ditto           | 52    | 4 9 6   | ditto             | 53    | 5 6 6  |
| ditto           | 31    | 5 5 6   | ditto             | 55    | 1 9 0  |
| ditto           | 30    | 2 1 6   | ditto             | 36    | 8 5 0  |
| ditto           | 45    | 6 1 0   | ditto             | 35    | 5 6 6  |
| ditto           | 29    | 1 0 0   | ditto             | 15    | 2 3 0  |
| ditto           | 16    | 0 12 0  | South Wh. Frances | 77    | 6 15 6 |
| Dadnace         | 43    | 7 12 6  | ditto             | 79    | 6 9 6  |
| Longclose       | 26    | 3 7 6   | ditto             | 61    | 10 4 6 |
| Wheal Bassett   | 126   | 2 17 6  | ditto             | 18    | 7 9 0  |
| Longclose       | 123   | 4 8 6   | ditto             | 60    | 1 13 6 |
| ditto           | 82    | 6 1 6   | ditto             | 52    | 2 17 0 |
| ditto           | 68    | 6 11 6  | ditto             | 46    | 6 1 6  |
| ditto           | 60    | 18 18 6 | ditto             | 32    | 2 4 0  |
| Wheal Seton     | 89    | 2 6 0   | North Roskear     | 104   | 8 14 0 |
| ditto           | 79    | 5 5 0   | Wheal Elizabeth   | 29    | 4 6 6  |
| ditto           | 76    | 6 13 0  | ditto             | 12    | 1 8 6  |
| ditto           | 46    | 6 3 0   |                   |       |        |

## TOTAL PRODUCE.

|                 |     |            |                   |     |            |
|-----------------|-----|------------|-------------------|-----|------------|
| Tincroft        | 722 | £2581 18 6 | Camborne Vein     | 368 | £1412 16 0 |
| North Pool      | 596 | 1806 9 6   | Wheal Francis     | 315 | 1060 19 0  |
| East Wh. Crofty | 586 | 2657 19 0  | Fowey Consols     | 275 | 1452 2 6   |
| Dadnace         | 43  | 2657 19 0  | Condurow          | 272 | 1245 7 0   |
| Wh. Bassett     | 560 | 3246 13 0  | South Wh. Frances | 263 | 1993 6 6   |
| Wh. Seton       | 543 | 2359 10 6  | Dolcoath          | 190 | 598 11 0   |
|                 |     |            | North Roskear     | 104 | 907 8 0    |
|                 |     |            | Wheal Elizabeth   | 41  | 142 10 6   |

|  |              |                         |                  |
|--|--------------|-------------------------|------------------|
| Average Standard   | £106 13 0    | Average Produce         | £1412 16 0       |
| Quantity of Ore  | 4535 tons    | Quantity of Fine Copper | 235 tons 19 cwt. |
| Amount of Money  | £21,465 11 6 |                         |                  |
| LAST SALE—Average Standard   | £103 19 0    | Average Produce         | 7 1/2            |
| Standard of corresponding sale last month, 1051 18s.—Produce, 7 1/2. |              |                         |                  |

## COMPANIES BY WHOM THE ORES WERE PURCHASED.

| Mines.                    | Tons. | Amount.      | Mines. | Tons. | Amount. |
|---------------------------|-------|--------------|--------|-------|---------|
| Mines Royal               | 310   | £1043 16 6   |        |       |         |
| Vivian and Sons           | 639   | 1775 6 9     |        |       |         |
| Freeman and Co.           | 788   | 3498 6 9     |        |       |         |
| Greenfield and Sons       | 879   | 852 3 3      |        |       |         |
| Crown Company             | 128   | 3648 7 0     |        |       |         |
| Sims, Williams, & Co.     | 427   | 1957 17 0    |        |       |         |
| Williams, Foster, and Co. | 1352  | 6779 7 9     |        |       |         |
| Schneider and Co.         | 282   | 1417 8 6     |        |       |         |
| Total tons.               | 4835  | £21,465 11 6 |        |       |         |

Copper ores for sale on Thursday next, at Andrew's Hotel, Redruth.—Mines and Parcells.—Carn Brea 337—Tywarthayle 601—Wheal Buller 252—Far Consols 303—Alfred Consols 260—Willingdon Mines 230—Levant 290—West Wheal Treasury 154—Polberro Mine 139—West Wheal Seton 130—Wheal Tremayne 116—Botallack 41—West Fowey Consols 65—Wheal Agar 58—St. Aubyn and Grylle 27—Trannack 27—Wheal Squire 22—Herland 21—Wheal Prosper 18—Wheal Banna 16—East Wheal Treasury 10—Wheal Trannack 5—Trenow Consols 4.—Total, 3674 tons.

Copper ores for sale, on Thursday next, at Andrew's Hotel, Redruth.—Mines and Parcells.—Devon Great Consols, Wheal Josiah, Wheal Maria, Wheal Fanny, and Wheal Anna Maria, 1601—West Caradon 336—Mark Valley 334—Fowey Consols 237—Wheal Friend 201—Holmshill 164—Phoenix Mines 153—Bedford United Mine 122—Wheal Pin-22—Pembroke 2.—Total quantity of ore to be sold, 3173 tons.

## PRICES OF MINING SHARES.

\* As it is exceedingly difficult to obtain a correct knowledge of all the mines in our list in London, we trust the agents, and others interested, will assist us, by forwarding any corrections with which they may be acquainted—our object being to present as perfect a list as can be procured.

## BRITISH MINES.

| Shares. | Company   | Paid.   | Price.        |
|---------|---|---------|---------------|
| 5120    | Alfred Consols (copper), Hayle, Cornwall                    | 24      | 18 1/2        |
| 1248    | Alt-y-Crib (silver-lead), Tal-y-bont, Cardiganshire         | 5       | —             |
| 1248    | Balclutha (tin), St. Just, Cornwall                         | 9       | 10 10 1/2     |
| 1248    | Balclutha (tin), St. Just, Cornwall                         | 48      | 50            |
| 905     | Barrowden (lead), Goss, Ireland                             | 1       | 10 10 1/2     |
| 3650    | Bawden (silver-lead), Cornwall                              | 75      | 8 1/2         |
| 4000    | Bedford United (copper), Tavistock, Devon                   | 23      | 26 6          |
| 1280    | Birch Tor and Vitter (tin), Dartmoor, Devon                 | 10 1/2  | 4             |
| 1500    | Bishopstone (silver-lead), Glamorganshire                   | 22      | 10            |
| 6000    | Black Craig (lead), Kirkcudbrightshire                      | 5       | 5 1/2         |
| 1000    | Blackmore (iron), South Wales                               | 50      | 12 1/2        |
| 1024    | Bodmin Consols (copper), Cardiganshire                      | 4       | —             |
| 6000    | Bodmin Moor Consols (tin and copper), Bodmin, Cornwall      | 1       | 2 1/2         |
| 40      | Bolowal and Nanpean (tin), St. Just, Cornwall               | —       | 16            |
| 128     | Boscan (tin), St. Just, Cornwall                            | 10      | 10            |
| 60      | Boscan (tin), St. Just, Cornwall                            | 20      | 6             |
| 100     | Botallack (tin and copper), St. Just, Cornwall              | 182     | 200           |
| 1000    | Bridden (silver-lead), Bridford, Devon                      | 4       | —             |
| 10000   | Bridden Iron Works, Regis. (iron), South Wales              | 12      | 8             |
| —       | Ditto Ditto, scrip  | 10      | 10            |
| 2400    | Bryn-Arian (lead), Cardiganshire                            | 2       | 2 1/2         |
| 1000    | Bryntal   | 20      | 10 1/2        |
| 107     | Budnick Consols (tin), Perranzabuloe, Cornwall              | 52 1/2  | 10 1 1/2      |
| 406     | Butterson (lead), Menheniott, Cornwall                      | 1 1/2   | 8             |
| 2000    | Butterson Consols (silver-lead), Cardiganshire              | 4       | 4 1/2         |
| 1000    | Butterson (silver-lead), Cardiganshire                      | 1 1/2   | 1 1/2         |
| 1000    | Callington Consols (copper), Camborne, Cornwall             | 26      | 6 1/2         |
| 1000    | Camborne Consols (copper), Camborne, Cornwall               | 1       | 10            |
| 20000   | Cameron's Steam Coal (coal), Swansea, Wales                 | 7       | —             |
| 1168    | Caradon Great Cons. Mines (copper), Linkinhorne, Corn.      | 7       | 3             |
| 1536    | Caradon Vale (copper and lead), St. Ives, Cornwall          | 1 1/2   | 1 1/2         |
| 1000    | Carboda (tin and copper), Crowan, near Camborne             | 5       | 10            |
| 1000    | Carbrea (copper and tin), Illogan, Cornwall                 | 15      | 120           |
| 1000    | Carbrea (copper and tin), Illogan, Cornwall                 | 21 1/2  | 60 88         |
| 1056    | Carvernall (copper & lead), near Wadebridge, Cornwall       | 6       | 40 30         |
| 200     | Cash (copper), Gwennap, Cornwall                            | 45      | 100           |
| 200     | Cash (copper), Gwennap, Cornwall                            | 20      | 115 120       |
| 2560    | Cash's Kitchen (copper and tin), Illogan, Cornwall          | 14      | 9 10 1/2      |
| 1000    | Coombe Valley Quarry (slate), St. Ginnis, Cornwall          | 5       | 2             |
| 1000    | Cornwall Consols (copper), Crowan, Cornwall                 | 10      | 10 1/2        |
| 900     | Cornwall Consols (copper), Crowan, Cornwall                 | 10      | 10 1/2        |
| 211     | Cradock Moor (copper), St. Cleer, Cornwall                  | 28      | 7 1/2         |
| 1600    | Craig-y-Mwyn (lead), Llanrhadr, Montgomeryshire             | 8       | 10            |
| 256     | Crane and Belwasa (copper), Camborne                        | 8       | 2             |
| 1000    | Cwm Erhyn (lead), Cardiganshire                             | 4       | 5             |
| 2000    | Cwm Sehon   | —       | 4             |
| 2000    | Cwm-y-wyl (lead), Cardiganshire                             | 60      | 90            |
| 1000    | Cwm-y-wyl (lead), Cardiganshire                             | 9       | 8             |
| 7100    | Derwent (silver-lead), Durlan                               | 1       | —             |
| 1040    | Devon and Courtenay Consols (copper), near Tavistock        | 6       | 1 1/2         |
| 1024    | Devon Great Consols (copper), near Tavistock                | 1       | 240 245       |
| 1000    | Dhurolath (copper), Ireland                                 | 2       | 5             |
| 180     | Dolcoath (copper and tin), Camborne                         | 252     | 18 50         |
| 2560    | Drake Walls (tin and copper), Calstock, Cornwall            | 6 1/2   | 2 1/2         |
| 1000    | Durham Corny Coal (coal), Durham                            | 45      | 5             |
| 3000    | Drygwyn (lead), Goss, Ireland                               | 10      | 2             |
| 1024    | East Balleswidden (tin), Saerced, Cornwall                  | 4       | 2             |
| 2500    | East Birch Tor (tin), North Bovey, near Ashburton           | 3       | 3             |
| 1024    | East Buller (copper), near Redruth, Cornwall                | 2       | 6 1/2         |
| 128     | East Carn Brea (copper), Redruth, Cornwall                  | 1       | 3             |
| 2018    | East Crowndale (tin), Tavistock                             | 7 1/2   | 1 1/2         |
| 150     | East Daren (lead), Cardiganshire                            | 14      | 51 52 1/2     |
| 1000    | East Duloe (copper), Gwennap, Cornwall                      | 13 1/2  | 13            |
| 4000    | East Duloe (copper), Gwennap, Cornwall                      | 1       | 1 1/2         |
| 1024    | East Polgoth (tin), Cornwall                                | 6       | 7 1/2         |
| 128     | East Pool (tin and copper), Pool, Illogan, Cornwall         | 24 1/2  | 80 50         |
| 256     | East Seton and Wheel Maude, near Redruth, Cornwall          | —       | 4 1/2         |
| 1024    | East Sharp Tor (copper), Cornwall                           | —       | 8             |
| 9000    | East Tamar Consols (silver-lead), Beer Ferris, Devon        | 1 1/2   | 2 1/2         |
| 256     | East Tolgus (copper), Redruth, Cornwall                     | 1 1/2   | 5 1/2         |
| 1000    | East Trevelin (tin), near Redruth, Cornwall                 | 1       | 2 1/2         |
| 128     | East Tywarhly (copper), St. Agnes, Cornwall                 | 1       | —             |
| 94      | East Wheal Crofty (copper), Illogan, Cornwall               | 123     | 110 120       |
| 256     | East Wheal Frances, Illogan                                 | 2 1/2   | 5 1/2 6       |
| 1000    | East Wheal Reeth  | 5       | 1 1/2         |
| 512     | East Wheal Leisure (copper), Perranzabuloe                  | 2       | 20 30         |
| 128     | East Wheal Rose (silver-lead), Newlyn, Cornwall             | 50      | 550           |
| 1280    | Egale Lize (lead), Llanfangel-y-Byrrh, Cardigan.            | 9       | 3 1/2         |
| 4000    | Elphinstone (tin), Goss, Ireland                            | 40      | 30            |
| 494     | Fewey Consols (copper), Tywardreath, Cornwall               | 40      | 30            |
| 1024    | Frodd Llywdd Mines (lead), Wales                            | 1 1/2   | 3 1/2         |
| 256     | Garras (lead), near Truro                                   | 43      | 23            |
| 1000    | Gelli-rei-vin (silver-lead), Cardiganshire                  | 1       | 5             |
| 4000    | General Mining Company for Ireland (copper), Ireland        | 1 1/2   | 4             |
| 1000    | Goninan (lead), Cardiganshire                               | 5       | 250           |
| 256     | Goninan (copper), St. Cleer, Cornwall                       | 46      | 15            |
| 2500    | Goninan Consols (copper), St. Cleer, Cornwall               | 1 1/2   | 7 1/2         |
| 256     | Grambler and St. Aubyn (copper), Redruth, Cornwall          | 80      | 35 37 1/2     |
| 2000    | Great Beam (tin)  | 5       | 68 74         |
| 95      | Great Consols (copper), Gwennap, Cornwall                   | 1000    | 250           |
| 512     | Great Wheal Baddon (tin and silver-lead), Kea, Cornwall     | 20      | 100           |
| 1024    | Great Wheal Baddon (tin and silver-lead), Kea, Cornwall     | 2       | 4 1/2         |
| 3072    | Great Wheal Mitchell Consolidated, Lameret                  | —       | 5             |
| 512     | Great Wheal Mitchell (copper), Lameret                      | 29      | 20            |
| 6000    | Grownla State Company, Camelford, Cornwall                  | 5       | 5             |
| 1024    | Gustavus Mines (copper), Camborne                           | 4       | —             |
| 512     | Hawke's Point (copper), Uny Lelant, Cornwall                | 5 1/2   | 7 1/2         |
| 1240    | Hawkmoor (copper), Calstock, Gunnis Lake                    | 5       | 17            |
| 6000    | Helgaton Down Consols (copper), Calstock, Cornwall          | 24      | 2 3           |
| 1000    | Hennock (silver-lead), Hennock, near Exeter, Devon          | 2       | 3 1/2         |
| 512     | Herdfoot (lead), near Liskeard                              | 16      | 14 15         |
| 0000    | Liberty Consols (copper), near Liskeard                     | 12 1/2  | 20            |
| 1000    | Holmbush (lead and copper), Callington                      | 22      | 20            |
| 1000    | Keswick (lead), Fortinscale, near Keswick                   | 11      | 2 3           |
| 1024    | Kingsett & Bedford (lead), St. Mary Tavy, Devon             | 38      | 3             |
| 787     | Kirkcudbrightshire (lead), Kirkcudbrightshire, Scotland     | 84      | 5 5 1/2       |
| 3018    | Lamheroe Wheal Maria (copper and tin), Lameret              | 11      | 10 12         |
| 256     | Lanarth Consols (copper), Gwennap, Cornwall                 | —       | 8 1/2         |
| 160     | Lelant Consols (tin), Uny Lelant, Cornwall                  | 53      | 26            |
| 1000    | Lelant Consols (tin), Uny Lelant, Cornwall                  | 17      | 175           |
| 1000    | Lewis (tin and copper), St. Erth, Cornwall                  | 75      | 600           |
| 100     | Lisburne (lead), Cardiganshire                              | 94      | 9 10          |
| 1000    | Livynualess (lead), Cardiganshire                           | 50      | 50            |
| 5000    | Llynvi Iron (iron), North Wales                             | 7       | 7             |
| 6000    | Low's Patent Copper Company                                 | 10      | 5 1           |
| 6000    | Marke Valley (copper), Caradon, Cornwall                    | 34      | 14 1 1/2      |
| 128     | Mendip Hills (lead), near Bristol                           | 34      | —             |
| 1024    | Mill Pool (tin and copper), St. Hilary and Germen, Corn.    | 22 1/2  | 40            |
| 256     | Mineral Court (tin), St. Stephens, near St. Austell         | 7       | 5 1/2 5 1/2 5 |
| 0000    | Mining Co. of Ireland (copper, &c.), Waterford, Ireland     | 14      | 24 3          |
| 1024    | Moditham & Marrabro's (copper & lead), Botes-fleming        | 6       | 11 1/2 12     |
| 320     | Montgomery (lead and copper), Montgomeryshire               | 1       | 2             |
| 320     | Nansogollan (tin and copper), Camborne                      | 34      | 25            |
| 2000    | Nantes (lead), Cardiganshire                                | 2       | 5 1/2         |
| 3000    | New East Crowndale (copper and tin), Tavistock              | —       | 15 15         |
| 6000    | North Wheal Basset (copper and tin), Illogan, Cornwall      | 3       | 8 1/2         |
| 1024    | North Buller (copper), Redruth, Cornwall                    | 5       | 7             |
| 1200    | North Wheal Buller, or Gt. South Tolgus (copper), Redruth   | —       | 8             |
| 100     | North Pool (copper and tin), Pool, Cornwall                 | 45      | 420           |
| 140     | North Roskar (copper), Camborne, Cornwall                   | 54      | 160           |
| 256     | North Wheal Leisure, Perranzabuloe, Cornwall                | 1 1/2   | 12            |
| 512     | North Wheal Vro (tin), Braze, near Helston, Cornwall        | —       | 5             |
| 128     | Par Consols (copper), St. Blazey, Cornwall                  | 55 1/2  | 650           |
| 1024    | Pendarves Consols (copper), Camborne, Cornwall              | 24      | 6 1/2         |
| 1000    | Pendarves and St. Aubyn (copper), Camborne, Cornwall        | 5       | 12            |
| 4934    | Pennant and Craigwen (lead), Wales                          | 3       | 3             |
| 2048    | Pentrice Glaze, Unliff, (silver-lead), St. Minver, Cornwall | 6       | 5             |
| 1000    | Perran St. George (copper and tin), Perranzabuloe           | 214     | 20            |
| 1024    | Penzance Consols (tin), Saerced, Cornwall                   | 224 3/4 | 1             |
| 1000    | Peter Tavy and Mary Tavy (copper), Tavistock, Devon         | 24      | 6 7           |
| 512     | Plymouth Wheal Teolund (tin), Plymouth, Devonshire          | 61      | 6             |
| 1000    | Ditto Preferential  | 15      | —             |
| 1000    | Polberron (tin), St. Agnes, Cornwall                        | 10      | —             |
| 560     | Providence Mines (tin), Uny Lelant, Cornwall                | 10      | 30            |
| 0000    | Rhoscawen (lead), Bodelwyddan, North Wales                  | 10      | —             |
| 2000    | Rhymney Iron (iron), Rhymney, South Wales                   | 50      | 12            |
| 0000    | Ditto New   | 7       | 3             |
| 5000    | Rochs Rock (tin), Roche, near St. Austell                   | 1       | 1             |
| 5000    | Rochs Mine (tin), Roche, near St. Austell                   | 5       | 6 7           |
| 2048    | Runnaford Coombe (tin), Devon                               | 2 1/2   | 3 1/2         |
| 2048    | Snowdon (copper), Carnarvonshire, Wales                     | 3       | —             |
| 256     | South Caradon (copper), St. Cleer, Cornwall                 | 8       | 230           |
| 1000    | South Dolcoath (copper), Illogan, Cornwall                  | 10      | 6             |
| 256     | South Dolcoath (copper), Illogan, Cornwall                  | 6       | 3 1/2         |
| 256     | South Friendship Wheal Ann (copper & tin), Devonshire       | 30      | 28 30         |
| 1024    | South Molton (lead), Devonshire                             | 12      | 12 1/2        |
| 3024    | South Plain Wood (copper), Ashburton, Devon                 | 3       | 6 7           |
| 1000    | South Speed (copper and tin), Uny Lelant, Cornwall          | 35      | 30            |
| 2000    | South Tamar (silver-lead), Beer Ferris, Devon               | 1       | 24 2 1/2      |
| 256     | South Tolgus (copper), Redruth, Cornwall                    | 31      | 155 160       |
| 256     | South Wheal Leisure, Perranzabuloe, Cornwall                | 1       | 1             |
| 1000    | South Wheal Basset (copper), Illogan, Cornwall              | 10 1/2  | 330           |
| 124     | South Wheal Frances (copper), Illogan, Cornwall             | 75 1/2  | 600           |
| 256     | South Wheal Josiah (copper), Calstock, Cornwall             | 2       | 3 1/2         |



## BRITISH MINES—Continued.

| Share. | Company.   | Paid. | Price.   |
|--------|--|-------|----------|
| 280    | Spears Moor (copper), St. Just, Cornwall                 | 30    | 40       |
| 128    | Spears Moor (copper), St. Just, Cornwall                 | 10    | 60 61    |
| 245    | St. Aubyn and Grylls (copper and tin), Breaze, Corn.     | 24    | 31       |
| 94     | St. Ives Consols (tin), St. Ives, Cornwall               | —     | 80       |
| 999    | St. Minver Consols (silver-lead), Cornwall               | 1     | 6        |
| 1000   | Stray Park (copper), Camborne, Cornwall                  | 10    | 21       |
| 9600   | Tamar Consols (silver-lead), Berrisford, Devon           | 4     | 53       |
| 687    | Tavy Consols (copper), near Tavistock                    | 4     | 53       |
| 4000   | Tyn-y-Wergid (slate), near Carnarvon, North Wales        | 7     | 4 5      |
| 6000   | Tincroft (copper and tin), near Pool, Cornwall           | 7     | 11 12 13 |
| 128    | Tockenbury (copper), St. Ives, near Liskeard             | 7     | 8        |
| 240    | Tolcarne (tin and copper), Camborne, Cornwall            | 8     | 5 5 5 5  |
| 1024   | Trannack and Boscawen, St. Erth                          | 1     | 14 16    |
| 1024   | Trannack United Mines (tin and copper), Helston, Corn.   | 1     | 14       |
| 2048   | Trebell Consols (tin and copper), Llanivet, near Bodmin  | 1     | 14       |
| 612    | Treburget United (lead), St. Teath, Cornwall             | 1     | 14       |
| 3000   | Trugar Consols (antimony and silver-lead), St. Kew       | 1     | 2 3      |
| 256    | Trugarden (silver-lead), Wadebridge, Cornwall            | 10    | 8        |
| 256    | Trohan (silver-lead), Menheniot                          | 1     | 15       |
| 5000   | Treleigh Consols (copper), Redruth                       | 6     | 3 3 3    |
| 1024   | Trethelick, Stithians, Cornwall                          | —     | —        |
| 150    | Trevelyan Consols (tin), St. Ives, Cornwall              | —     | —        |
| 2000   | Truance (copper), Helston, Cornwall                      | 10    | 7 8      |
| 1500   | Treowick (slate quarries)                                | 24    | 3 4      |
| 96     | Trevaean (copper), Gwennap                               | 10    | 130 140  |
| 120    | Trevelick (copper), Gwennap                              | 5     | 18       |
| 120    | Trevelick and Harrier (copper), Gwennap, near Redruth    | 130   | 240      |
| 512    | Trevelick (copper), St. Cleer, Cornwall                  | 5     | 8        |
| 512    | Treville (lead), Lewannick                               | 1     | 6 7      |
| 504    | Trowan (copper), Trowan, Cornwall                        | 2     | 180      |
| 1000   | Tylwyd (lead), Cardiganshire                             | 2     | 34       |
| 500    | Tywarthayle (copper), Illogan and St. Agnes              | 60    | 37 3     |
| 300    | United Mines (copper), Gwennap                           | 300   | 140      |
| 5000   | Warleggan Consols (copper), Cornwall                     | —     | —        |
| 1024   | Wellington Mines (copper and tin), Perranuthnoe, Corn.   | 6     | 16 1     |
| 1024   | West Alfred Consols                                      | 5     | 10 10 1  |
| 128    | West Buller (copper), Redruth, Cornwall                  | 20    | 150      |
| 256    | West Canadon (copper), Liskeard                          | 20    | 95 95    |
| 128    | West Ding-Dong   | 2     | 8        |
| 512    | West Forey Consols (tin and copper), St. Blazey          | 40    | 60       |
| 2048   | West Goginan (silver-lead), Cardiganshire                | 14    | 2 3      |
| 1024   | West Par Consols (copper), St. Blazey, Cornwall          | 10    | 124      |
| 3500   | West Polgoth (tin), St. Ewe and St. Mewan, Cornwall      | 5     | 7        |
| 512    | West Providence (tin), St. Erth, Cornwall                | 10    | 40 41    |
| 200    | West Selen (copper), Camborne, Cornwall                  | 12    | 10 10 11 |
| 940    | West Tolgus (copper), Illogan, Cornwall                  | 5     | 20       |
| 120    | West Trevelick (copper), Gwennap, Cornwall               | 5     | 20       |
| 512    | West Wheel Friends (copper), Illogan, Cornwall           | 5     | 14       |
| 1024   | West Wheel Friends (copper), Devon                       | 3     | 3 4      |
| 3845   | West Wheel Jewel (tin and copper), St. Day, Cornwall     | 12    | 24       |
| 2048   | West Wheel Rose (lead), Cornwall                         | 12    | 3        |
| 500    | West Wheel Torgan (copper), Illogan, Cornwall            | 7     | 14 15    |
| 1024   | West Wheel Treasury (copper), Gwennap, Cornwall          | 6     | 5        |
| 1024   | West Wheel Tyn (tin), Sancreed, Cornwall                 | 1     | 2        |
| 1024   | Weston (lead)  | 4     | 4        |
| 5200   | Wicklow (copper), Wicklow, Ireland                       | 5     | 17 18    |
| 5000   | Wicklow (copper and sulphur), Wicklow, Ireland           | 3     | 34 35    |
| 1070   | Wheal Adams (lead), Christow, Exeter                     | 128   | 16       |
| 1000   | Wheal Agar (copper), Illogan, Cornwall                   | —     | 5 6      |
| 256    | Wheal Agar (copper), Cornwall                            | 10    | 28 29    |
| 128    | Wheal Ann (tin), near Helston, Cornwall                  | —     | 80 80    |
| 300    | Wheal Arthur (lead), near East Wheel Rose, Cornwall      | 17    | 50       |
| 2048   | Wheal Arthur, Calstock                                   | 2     | 2        |
| 3072   | Wheal Augusta (tin), St. Just, Cornwall                  | 4     | 4        |
| 120    | Wheal Bal (tin), St. Just, Cornwall                      | 10    | 14       |
| 256    | Wheal Benny (copper), Calstock, Cornwall                 | 19    | 5        |
| 1024   | Wheal Bray (copper), Altarnun, Cornwall                  | 11    | —        |
| 332    | Wheal Calstock (copper), Calstock, Cornwall              | 9     | 10       |
| 256    | Wheal Carpenter (tin and copper), Gwennap, Cornwall      | 2     | 24       |
| 208    | Wheal Courtenay (copper), Cornwall                       | 20    | 22       |
| 1024   | Wheal Crebor (copper), Tavistock, Devon                  | 18    | 3        |
| 500    | Wheal Daniel (copper), Chacewater                        | 5     | —        |
| 182    | Wheal Elizabeth (copper), Redruth, Cornwall              | 9     | 52 53    |
| 1024   | Wheal Emily (lead and antimony), near Plymouth           | 3     | 54 54    |
| 1024   | Wheal Farncombe (copper), near Tavistock, Devon          | 14    | 10 1     |
| 754    | Wheal Farncombe (copper), near Tavistock, Devon          | 14    | 8 10     |
| 100    | Wheal Friendship (tin), St. Agnes, Cornwall              | 70    | 120      |
| 128    | Wheal Friendship (copper), Devon                         | —     | 120      |
| 1000   | Wheal Gunkis (tin and copper), St. Hilary, Cornwall      | —     | 3        |
| 4000   | Wheal Golden (lead), Perranuthnoe, Cornwall              | 2     | 5 6      |
| 1000   | Wheal Grose (silver-lead, copper, &c.), near Wadebridge  | 4     | —        |
| 1000   | Wheal-an-Groze (tin), St. Columb Major, Cornwall         | 5     | 5 6      |
| 2560   | Wheal Harriet (copper), Camborne, Cornwall               | 1     | 4 4 5    |
| 1024   | Wheal Harriet, near Tavistock, Devon                     | —     | 18       |
| 2048   | Wheal Harriet (lead), near Tavistock, Devon              | —     | 12 2     |
| 216    | Wheal Henry (copper), Kew, near Truro, Cornwall          | —     | 8 12     |
| 256    | Wheal Kingston (copper and silver-lead), Stoke Climland  | 4     | 14       |
| 6000   | Wheal Langford (copper and silver-lead), Callington      | 4     | 2 24     |
| 2000   | Wheal Langmaid (lead), Devon                             | 4     | 1 14     |
| 112    | Wheal Margaret (tin), Uney Lelant, near Hayle            | 79    | 150      |
| 1024   | Wheal May (silver-lead and copper), Botes-dimming        | 14    | 12       |
| 500    | Wheal Mary (copper), Redruth, Cornwall                   | 14    | 12       |
| 512    | Wheal Mary Ann (lead), Menheniot                         | 9     | 59 60    |
| 1024   | Wheal Neppine (copper), Perranuthnoe, Cornwall           | 1     | 5        |
| 1024   | Wheal Oak, near Helston, Cornwall                        | 14    | 14       |
| 3000   | Wheal Penhale (lead and copper), Cornwall                | 2     | 26       |
| 128    | Wheal Plenny (copper), Redruth, Cornwall                 | 19    | 38 39    |
| 128    | Wheal Pollard (copper), St. Cleer, Cornwall              | 10    | —        |
| 210    | Wheal Prospect   | 4     | 7        |
| 5000   | Wheal Providence (copper), Cornwall                      | 4     | 14       |
| 120    | Wheal Reeth (tin), St. Ives, Cornwall                    | 41    | 150      |
| 1024   | Wheal Russell (copper), Tavistock                        | 4     | 4 44     |
| 198    | Wheal Seton (copper), Camborne, Cornwall                 | 107   | 260      |
| 1056   | Wheal Sarah (silver-lead), St. Kew, Cornwall             | 5     | 6        |
| 512    | Wheal Sophia (silver-lead), Lant, Cornwall               | 6     | 7        |
| 512    | Wheal Spry (copper and lead), St. Columb Minor           | 8     | 1        |
| 128    | Wheal Squire (copper), St. Erth, Cornwall                | —     | 5        |
| 1000   | Wheal Stann, Breage and Gwennap, Cornwall                | —     | 24       |
| 512    | Wheal Trefusis (copper), Gwennap, Cornwall               | 64    | 20 21    |
| 120    | Wheal Trescott (tin), Llanivet, near Bodmin, Cornwall    | 3     | 6        |
| 500    | Wheal Trevelyan (silver-lead), near Liskeard, Cornwall   | 6     | 44 45    |
| 256    | Wheal Tremaine (copper), St. Ervan, Cornwall             | 11    | 24       |
| 1024   | Wheal Tremayne (tin and copper), Gwennap, near Hayle     | 9     | 19 20    |
| 267    | Wheal Tryphens (tin and copper), Camborne, Cornwall      | 40    | 30       |
| 128    | Wheal Union (copper), Redruth, Cornwall                  | —     | 38 40    |
| 1024   | Wheal Venn (copper), Liskeard, Cornwall                  | 3     | 9 10     |
| 1300   | Wheal Vincent (tin), Altarnun, Cornwall                  | 5     | 7        |
| 128    | Wheal Violet (tin and copper), St. Stephens, St. Austell | 5     | 24       |
| 128    | Wheal Vlow, Perranuthnoe                                 | 3     | 8        |
| 184    | Wheal Vyryan (copper and tin), Constantine, Cornwall     | —     | 60       |

## FOREIGN MINES.

|       |   |     |       |
|-------|---|-----|-------|
| 5000  | Alten Mining Company (copper), Norway                 | 14  | 3     |
| 12000 | Annotto Bay Mining Association, Jamaica               | 1   | —     |
| 15000 | Asturian Mining Company (coal, iron, &c.), Spain      | 15  | —     |
| 20000 | Australasian (copper), South Australia                | 18  | 34    |
| 6000  | Barrota Range (copper), South Australia               | 18  | 34    |
| 10000 | Brazilian Imperial (gold), Brazil                     | 23  | 54    |
| 12000 | Cobre Copper Company (copper), Cuba                   | 40  | 32 33 |
| 10000 | Copiapó Mining Company (copper), Chile                | 14  | 5     |
| 20000 | General Mining Association (iron & coal), Nova Scotia | 20  | 134   |
| 5000  | Kinzigthal Mining Association (silver), Germany       | 2   | —     |
| 5000  | Linares (lead), Spain                                 | 3   | 2 24  |
| 500   | Ditto New   | 3   | 5     |
| 5001  | Mexican Company (silver), Mexico                      | 59  | 14    |
| 20000 | Mexican and South American (silver), Mexico           | 3   | 1 13  |
| 5000  | National Brazilian (gold), Brazil                     | 30  | 34 35 |
| 10000 | North British Australasian (copper), S. A. & New Zea. | 1   | 4 4   |
| 7000  | Royal Santiago (copper), Cuba                         | 10  | 8 9   |
| 11000 | St. John del Rey (gold), Brazil                       | 15  | 16    |
| 43174 | United Mexican (silver), Mexico                       | Av. | 28 1  |
| 19000 | Worthing (copper), Adelaide, South Australia          | 2   | 2     |

## CURRENT PRICE OF GOLD AND SILVER.

|                       |                 |                           |                 |
|-----------------------|-----------------|---------------------------|-----------------|
| Foreign gold, in bars | per oz. £3 17 9 | New dollars               | per oz. £2 4 11 |
| Portugal pieces       | 0 0 1           | Silver in bars (standard) | 0 5 14          |

## COAL MARKET, LONDON.

## PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

|   |
|---|
| MONDAY.—Buddle's West Hartley 15—Carr's Hartley 15—Coxon's West Hartley 14—East Adair's Main 12—Hedley's Hartley 14—Hollywell 15—North Percy Hartley 14—Ord's Main 14—Ravensworth West Hartley 14—South Paerth 12—Tanfield Moor 13—Tanfield Moor Butes 13—West Wylam 13—Wylam 14—Wall's End Gorton 14—Original Gibson 14—Riddell 14—Walker 14—Bell 15—Braddley 16—Hotton 16—Hawell 16—Lambton 16—Richmond 15—Russell's Hetton 13—Scarborough 15—Stewart's 16—Bishop's Primrose Main 14—Kelso 13—Whitworth 13—Adelaide Test 15—Maclean's Test 14—South Durham 14—Tess 16—Woodfield 13—Reggie's Hartley 14—Brannopth Coke 29—Corpen Hartley 15—Derwentwater Hartley 15—Hartley 14 to 16—Ships at market, 118; sold, 63. |
| WEDNESDAY.—Buddle's West Hartley 15—Carr's Hartley 15—Coxon's West Hartley 14—East Adair's Main 12—Hedley's Hartley 14—Hollywell 15—North Percy Hartley 14—Ord's Main 14—Tanfield Moor Butes 13—West Wylam 13—Wylam 14—Wall's End Gorton 14—Original Gibson 14—Riddell 14—Walker 14—Bell 15—Braddley 16—Hotton 16—Hawell 16—Lambton 16—Richmond 15—Russell's Hetton 13—Whitworth 13—Adelaide Test 15—Maclean's Test 14—South Durham 14—Tess 16—Woodfield 13—Reggie's Hartley 14—Brannopth Coke 29—Corpen Hartley 15—Derwentwater Hartley 15—Hartley 14 to 16—Ships at market, 56; sold, 29.   |
| FRIDAY.—Buddle's West Hartley 15—Carr's Hartley 15—Hedley's Hartley 14—Hollywell 15—North Percy Hartley 14—Ord's Main 14—Ravensworth West Hartley 14—South Paerth 12—Tanfield Moor 13—Tanfield Moor Butes 13—West Wylam 13—Wylam 14—Wall's End Gorton 15—Riddell 15—Eden Main 13—Belmont 15—Hotton 17—Hawell 17—Lambton 16—Russell's Hetton 16—Whitworth 13—Adelaide Test 16—South Durham 15—Hedley's Hartley 14—Birchgrove Grains 19—Whitworth Coke 21—Hartley 14—Ships at market, 30; sold, 23.   |

## NOTICES TO CORRESPONDENTS.

In the "MINING JOURNAL" of the 4th of JANUARY, 1851, will appear the commencement of a SERIES of PAPERS, to be continued weekly, detailing

## The History of Mining,

## ITS RISE AND PROGRESS:

together with NOTICES of the EARLY METHODS of WORKING; ANCIENT and MODERN INVENTIONS, with their subsequent IMPROVEMENTS; comprising also A SKETCH of METALLURGICAL OPERATIONS, from the EARLIEST PERIOD to the PRESENT TIME.

## The Great Exhibition.

In the "MINING JOURNAL" will also be given a detailed description, with all necessary illustrations, of every object connected with MINING and ENGINEERING, which may be produced at the forthcoming Great Exhibition.

## The Compendium of British Mining,

BY J. Y. WATSON, ESQ., F.G.S.

We have the pleasure to announce, that Mr. WATSON has consented to revise and correct, to the present time, his interesting EPITOME of BRITISH MINES, for republication in our Journal, and that the first portion will appear on the 4th January next. In the "Compendium of British Mining," it will be remembered, the actual position of the different mines is accurately described, both as to capital and working.

At the end of each year, a copious Index is published, which renders the volume an interesting and valuable record.

\* \* We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

THE OWNERS' MIXTURE.—We have received copies of several letters which have passed between Capt. Abolam Francis and Mr. John Taylor, Jun., respecting the management of this mine. However much we may deplore the existence of dissatisfaction, we cannot think the publication of such correspondence as that forwarded would in any way tend to allay the feeling, or remedy the evils complained of. If Capt. Francis would, in a report on the property, point dispassionately to the course which should be pursued to bring the adventure into a profitable state of working, we have no doubt, from his great practical experience and acknowledged ability, Mr. Taylor would pay every attention to his suggestions, for his own sake as well as that of the adventurers.

KINGSTON AND BEDFORD MIXTURE.—We think it better, on consideration, to withhold Mr. Taylor's letter, which appears to us calculated to revive matters that had better be forgotten, and obstruct the good understanding which it is the interest of all parties to establish. Mr. Taylor cannot, we are sure, wish his communication should produce this effect, especially after the unequivocal desire expressed by his friends to arrange all past differences. We willingly publish, however, his disclaimer of any wish to obtain the proprietorship for himself, a point which he affirms to be wholly inconsistent with the position of broker, as giving too many opportunities of jobbing the shares to suit the purpose of his letter. This public denial will, doubtless, answer the main purpose of his letter.

The quotation of Tincroft shares, in last week's Journal, was an error—instead of 10, it should have been 10 1/2.

Owen Jones (Adelaide).—Calcining in the open air can only be effectually performed with ores containing large quantities of sulphur.

"A Linares Shareholder."—Our correspondent will, perhaps, be better satisfied with the course proposed by the meeting last week, than by the meeting last week, which reflects on the comparatively negative results of the system of management hitherto adopted. The step resolved upon—viz., the formation of a smelting capital, was a bold, but we think also a wise one. With a less decided chairman, the shareholders would, perhaps, have been content to go on for an indefinite period, without being able to pronounce their speculation positively bad, yet with no results to justify much satisfaction. With more capital they may, on the grounds indicated, and the good reports of Messrs. Thomas and Curry, expect more favourable results, and, at least, will have the satisfaction of knowing that one main obstacle to larger returns will be removed.

"W. C." (Bond-street).—The experiment has already been made. From a communication we have just received, it appears that the candleless gas burner has been found by repeated trial to give the light of 24 candles, with a consumption of only 4 3/4 feet per hour. It is proper to state, however, that the gas employed was the Cannel gas of the Western Gas Company. Further trials will be made with this burner in the course of a few days with the gas of the Chartered Company, from the works in Brick Lane. We will give the results in a future number.

THE ELECTRIC LIGHT.—We are again compelled to postpone, till next week, the insertion of "Beta's" third letter, respecting the "attempt to deprive Messrs. Stait and Petrie of the honour and profit of their original invention for maintaining the continuity of the electric light by the dynamo power of the current itself." The great need of matter, coupled with the fact that the communication did not reach us till Friday, are the causes of the postponement.

"An Inquirer," respecting the Tyn-y-Wergid Slate Quarry, is informed that a brief notice appeared among our City Mining Intelligence last week, and from which we may gather something concerning the state and prospects of the company. Our authority for alluding so favourably to the prospects of the company we consider unexceptionable. It appeared also in our Share List, with the current price, to which we refer our correspondent.

"An Inventor."—The date of the patent of Mr. Joseph Gibbs, C.E., is May 7: it is for "improvements in artificial stone, mortar, and cements, and in the modes of manufacturing the same." The specification has not been published, but we are aware of, but any particulars can be obtained from Mr. Campin, the patent agent, 210, Strand.

"J. C." (Glasgow).—By referring to the Journal of Nov. 9, a description will be found of an improvement in the construction of the dynamo engine, &c. On comparing our notice with the account, illustrated by engravings, given in the "Practical Mechanics' Journal," we find it in all respects accurate, and sufficiently explanatory to enable the very ingenious contrivances of the Messrs. White and Grant to be fully appreciated.

"J. T."—The office of the English and Cambrian Assurance Society is in New Bridge-street, Blackfriars.

"G. B." (Poole).—The required particulars will be found in our "Glossary of Mining Terms," which can be obtained through any bookseller, price 2s.

"R. S." (Selby).—Address a note to Mr. Thos. Dunn, of the Windsor Bridge Iron-works, Manchester, who will forward a description of his patent traversing frame, which we believe to be the invention alluded to.

"T. B. L." (Manchester).—The ores which have been melted at the Elbe Copper Works have principally been obtained from South America; one or two cargoes from South Australia have likewise, we believe, been successfully treated there.

Richard Jones (Cardiff).—The Davy lamp has 784 meshes in the wire gauze cylinder in the square inch, and it has long been known that if the meshes were of a more open texture, for the purpose of giving a more suitable light, explosions in coal mines would even be more frequent than heretofore. Again, if the meshes in the Davy were smaller, so as to afford more safety, the flame of the lamp would be so insignificant that no pitman would attempt to work with such a lamp. It is a curious fact, that the above-mentioned inconveniences are happily obviated in the construction of the Clanny lamp; for in the latter are from 784 to 1596 meshes in the square inch, through which the air for combustion passes downward in safety through the meshes within the whole depth of a very thick glass cylinder. By this arrangement, from scientific discovery, the atmospheric air, when mixed with fire-damp at the exploding point, is rendered innocuous, being greatly expanded, and the flame of the lamp continues longer than in that of the Davy, and in perfect safety, readily indicating through the glass cylinder any change in respect to the fire-damp contained in the atmosphere of the coal mine. From the flame of the oil lamp being surrounded by the glass cylinder, no blower or strong current of air at the exploding point can reach the flame, nor can the pitman light their pipes at the flame. The Clanny lamp gives out four or five times more light than the Davy.

The journey from London to York can now be accomplished in rather over 5 1/2 hours: the first-class express train on the Great Northern Railway leaves King's-cross at 9.15, and arrives in York at 2.50. From Glasgow to London, by the same line, occupies 15 hours.

"W. M."—Mr. S. Reed's invention of metal chairs and sleepers, "for an entire construction of metal railway, in substitution of stone blocks and wooden sleepers," was specified in 1846.

"M. T."—The mode of manufacturing lucifer matches is by first dipping the end of the wood in sulphur, and then in a solution of phosphorus, with warm water, this is afterwards covered with gun water, to protect the phosphorus from the air. By rubbing the end of the match on sand paper, the thin coating of gun is scratched off, and the phosphorus, being heated by the friction, takes fire and ignites the sulphur.

LIFE IN PEACE, AND NO POPE!—A pamphlet under this pithy title, from the pen of Mr. C. Colwell, a gentleman not long since a contributor to our columns, has been forwarded to us. The brochure, which has, doubtless, been elicited by the popular ferment on the absorbing subject of Papal aggression, is not exactly of the class usually noticed in the Mining Journal, whose object it is to steer clear, as much as possible, of all social controversies, and especially those of a religious character. We have, nevertheless, glanced through Mr. Colwell's pamphlet, and feel no difficulty in awarding him credit for an earnest zeal and sincere desire to throw additional light on the subjects treated of. His object, as is revealed on the title page, is to show "the true source of the conversion of Britain unto Christianity: the rise and progress of Protestantism, with a visible succession in our Church from the time of Christ"—than which, to pious minds, no questions of greater perplexity could probably be adduced. Mr. Colwell, however, appears to think that he has cut up Popery by the roots in proving, as he manifestly believes he has done, that Christianity was planted in Britain by the Apostles, Peter and Paul, or, if not by them, by their immediate disciples. The space allotted to the discussion of this point being very limited, Mr. Colwell dispenses with giving us more than a very scanty portion of authorities, and the reader, even after a perusal of the work, may reasonably doubt whether anything certain is known of the matter. As to the "visible," or, we presume, "Apostolic" succession, however unscrupulously it may be claimed by the Romish Church, it is regarded as a much more dubious point by our own, as Mr. Colwell may perceive by referring to the Morning Herald of the 29th of Nov., in which he will find two learned bishops (Hoadley and Stillington) quoted as expressing a directly contrary opinion. He is entitled to praise, nevertheless, for accumulating much interesting information bearing upon this point, whatever may be thought of the conclusions he draws from it. His zeal for Protestantism, moreover, is unimpeachable, since he maintains that Christianity was publicly professed by authority in this kingdom about 130 years before it was in Rome. The latter portion of his pamphlet is occupied with general remarks on the Papal bull and its possible results; on which we shall only observe that, if we think he is too much of an alarmist, it is not because we are insensible to the importance of the subject which he has so earnestly taken up. It is one thing for the Pope to claim supremacy, and another for us to grant it; and unless we are to treat arrogant assumption as a positive invasion of our rights, which, by the way, is done by almost every orator and writer on this subject, we shall be obliged, after all, to wait for some more decisive act of aggression before any legislative step can be taken against the "Cardinal Archbishop" and his Catholic brethren. In conclusion, Mr. Colwell might have chosen less irritating epithets in alluding to his theological opponents; and even his Christianity would, we think, have shone more brightly if it had been set off by milder language and more charitable feeling.

"H." (Bristol).—An invention, or rather re-invention, which agrees in all its essential features with one previously patented and specified, however long since, or with what has been previously in public use and exercise, either in England and Wales, Scotland, Ireland, or the British dominions, will not sustain a patent; and this will be so even when the public use has been merely a using by one person in a public room, or place, where only a few persons are permitted to view the same (provided such persons are not bound to secrecy, and the exhibition is not considered secret). But in any case where the patentee believed to be the first and true inventor at the time of taking his patent, and afterwards discovers the invention to have been invented, or used prior to the date of his patent, he may, provided the said invention had not been publicly and generally used prior to the date of his patent, petition the Judicial Committee of Privy Council, and get the patent confirmed, and made good under Lord Brougham's Act. Mr. Campin, of the Patent-office, Strand, who supplied the above information, will give you any further particulars if required.

"A Miner" (Tavistock).—We must decline the offer; we could not publish the statement respecting East Wheel Russell, or similar information, without being properly authenticated.

"J. H. F." (Bosheria).—We received another report, which states that the water-wheel at Wheal Langmaid is to prove the mine at the 15 fm. level. Which is correct?

"R. W." (Lincoln).—The office of the British Electric Telegraph Company is at the Royal Exchange, London; the directors are—Messrs. J. Simpson, J. C. Cobbold, M.P., W. Gilbertson, A. Henderson, E. Highton, sen., E. Highton, W. W. Pearson, G. G. Scott, and T. Webster.

MINES INSPECTION.—Mr. Matthias Dunn, of Newcastle, is appointed Government Inspector for Durham, Northumberland, Cumberland, and Scotland. Mr. Dunn is well known to our readers, from his many valuable communications; and Mr. Joseph Dickenson, who has also contributed largely to our columns, has been for several years colliery viewer under the eminent firm of Sir John Guest, Bart., in South Wales. "S. H." (Salop) had better write to one of these gentlemen.



perative for the saving of life. He should have the power of suspending such workings as were satisfactorily made out to be in a dangerous state, as it is not only by explosion lives are lost, but by unguarded machinery, want of timber, neglect of officials, bad ropes and chains, and other minor matters, he could exercise a control without being "over meddling." As it will be seen to be quite necessary that the coal owner should have the power of appealing against the unreasonableness of any order that might emanate from the inspector, a distinct body, consisting of other inspectors or commissioners appointed by Act of Parliament, would have to be formed. The great objection hitherto to inspection has been the fear that it would be too intermeddling, and as such repugnant to the feelings and habits of Englishmen; in other cases people have objected to projects for improvements, because they were unwilling to pay for the opinions and advice of strangers, under an uncertainty whether or no they will derive any benefit; and as no stranger is entitled to force his opinions upon persons unsolicited, hence the slowness with which mining improvements progress. In throwing out these suggestions, however incomplete they may appear, and capable of further improvements, we by no means wish to obtrude our opinions on any class; but the question is of such vital importance, that we consider we should have been wanting in our duty if we had allowed the subject to pass unheeded or uncared for.

From the Board of Trade returns we extract the exports and imports of metals for the month ending the 5th of Nov., as well as the corresponding month of last year. It will be seen from the subjoined account, which refers to the exports of British and Irish produce and manufactures only, that the exports of copper have been on a rather larger scale than last year, whilst iron remains about the same. Lead has slightly fallen off, but in unwrought tin a considerable increase is to be noticed, which is still more observable as contrasted with the same month in 1848, when the exports of this metal were only 1103 cwt. The returns of exports are—

| Metals.   | EXPORTS. | 1849.  | 1850.  |
|---|----------|--------|--------|
| Iron, pig, and rod.....   | Tons     | 28,904 | 26,715 |
| " bar, bolt, and rod.....   | "        | 2,904  | 2,904  |
| " wire.....   | "        | 894    | 1,170  |
| " cast.....   | "        | 9,869  | 9,879  |
| " wrought, of all sorts.....  | "        | 643    | 598    |
| Steel, unwrought.....   | "        | 1,107  | 1,302  |
| Copper, in bricks and pigs.....   | Cwt.     | 20,596 | 22,549 |
| " sheets, nails, &c. (including mixed or yellow metal for sheathing)..... | "        | 1,181  | 886    |
| Brass of all sorts.....   | "        | 2,182  | 1,832  |
| Lead.....   | Tons     | 1,805  | 1,612  |
| Tin, unwrought.....   | Cwt.     | 18,996 | 39,003 |
| Tin-plates—value.....   | £        | —      | —      |

Of metals of foreign and colonial origin the exports, during the same month of 1849 and 1850, are as under:—

| Metals.                                     | 1849. | 1850. |
|---|-------|-------|
| Copper, unwrought and part wrought.....     | Tons  | 749   |
| Iron, in bars, unwrought.....               | "     | 556   |
| Steel, unwrought.....                       | "     | 194   |
| Lead, pig and sheet.....                    | "     | 90    |
| Spelter.....                                | "     | 600   |
| Tin, in blocks, ingots, bars, or slabs..... | Cwt.  | 436   |
| Quicksilver.....                            | Lbs.  | 861   |

The returns for the 10 months show that in the various articles coming under the head of metals and mineral produce, there has been an increase under most heads:—

| Metals.                        | 1849.    | 1850.      |
|--------------------------------|----------|------------|
| Iron, steel, hardware, &c..... | £437,841 | £593,407   |
| Copper and brass.....          | 111,848  | 152,755    |
| Lead.....                      | 7,617    | 32,134     |
| Tin.....                       | 37,477   | 62,569     |
| Coals and culm.....            | 90,178   | 88,201     |
| Salt and alkali.....           | 35,660   | 45,570     |
| Earthenware.....               | 59,409   | 67,328     |
| Glass.....                     | 18,820   | 21,797     |
| Total.....                     | £781,873 | £1,052,853 |

With the exception of spelter and tin, both of which exhibit a large decrease, the returns of imports show that the introduction of foreign and colonial produce has greatly increased, especially of unwrought and partly wrought copper, of which the imports are nearly double those of the same month last year. The import returns are as follows:—

| Metals.   | IMPORTS. | 1849.  | 1850.   |
|---|----------|--------|---------|
| Copper ore and regulus (entered under Act 8 & 9 Vic., c. 90).....           | Tons     | —      | —       |
| Copper weight of metal.....   | "        | 3,886  | 4,471   |
| " (entered under Act 11 and 12 Vic., c. 127, and previous resolutions)..... | "        | 4,441  | 8,549   |
| " unwrought and part wrought.....   | Cwt.     | 3,334  | 3,763   |
| Iron, in bars, unwrought.....   | Tons     | 291    | 2       |
| Steel, unwrought.....   | "        | 586    | 1,051   |
| Lead, pig and sheet.....  | "        | 4,179  | 1,968   |
| Spelter.....  | Cwt.     | 5,770  | 3,516   |
| Tin, in blocks, ingots, bars, or slabs.....                                 | Cwt.     | 47,705 | 100,661 |
| Quicksilver.....  | Lbs.     | —      | —       |

Of articles coming into competition with our mining interests the imports have been as follows:—

| Metals.                 | 1849. | 1850. |
|-------------------------|-------|-------|
| Brimstone.....          | Tons  | 1,090 |
| Barilla and alkali..... | "     | 155   |
| Iron, in bars.....      | "     | 334   |
| Steel.....              | "     | 20    |
| Lead.....               | "     | 225   |
| Tin.....                | "     | 44    |

Of other mineral produce the import has been—

| Metals.             | 1849. | 1850. |
|---------------------|-------|-------|
| Copper ore, &c..... | Tons  | 1,087 |
| Zinc.....           | "     | 1,108 |
| Saltpetre.....      | "     | 2254  |
| Quicksilver.....    | "     | 215   |

### A NEW LIGHT.

We understand that improvements in lighting, of an extraordinary character, are in course of being practically tested, and which promise to realise results of a most remarkable nature, both with respect to economy and great facility of production. We shall give full details as early as possible, and which, we have reason to believe, will prove of the utmost importance to the public generally.

**PATENT LAW REFORM.**—The committee appointed by the Society of Arts held their third meeting on Wednesday. The members present were the Right Hon. Thomas Milner Gibson, M.P. (in the chair); Henry Thomas Hope, Esq., M.P.; Henry Cole, Esq.; Richard Prosser, Esq. (of Birmingham); R. S. Newall, Esq. (of Gateshead); Prof. Solly; and Capt. Ibbotson. The resolutions unanimously passed are as follows:—1. That a collection of all the specifications be made, calendared, and indexed, and deposited, for public information, in the British Museum.—2. That it is highly desirable that such a collection should be printed and published.—3. That an annual report of all specifications registered, with proper indexes and calendars, be laid before Parliament.—4. That it should be permitted to commence actions for infringement of the rights of inventors in the county courts.—5. That, inasmuch as, contrary to expectation, very little litigation has been created by the rights conferred by the Designs' Acts of 1842 and 1843, the committee is of opinion that a fair trial should be given to the working of the proposed system of registration of inventions before any special tribunal, to determine inventive rights be substituted for the existing ones.

**ON THE PNEUMATICS OF MINES.**—At a meeting of the Neath Philosophical Society, held on the 2nd inst., Howel Gwyn, Esq., M.P. (the president), in the chair, the first of a series of papers was read by Mr. Joshua Richardson, F.G.S., &c., the object of which is to give, in a compendious form, a complete treatise on the principles and practice of mine ventilation. In his introductory remarks, the author stated that at present this information was diffused throughout numerous scientific works and the bulky folios of parliamentary and other official reports, which the underground managers of collieries had neither the means to obtain nor the requisite leisure to peruse. Were the agents better informed as to the phenomena and natural laws upon the operation of which the efficient ventilation of mines depends, the writer conceived that many terrible accidents would be avoided, and when they did unfortunately happen, the loss of life would be diminished. The author then proceeded to treat on the chemical properties of atmospheric air, its uses in the economy of nature, and the quantity required in a well-ventilated mine. The constituent elements of air, and the gases of which it is composed, were described; its decomposition by the processes of respiration and combustion, and its restoration to vitality by vegetables, were then enlarged upon; and the quantity of air required in a mine for the chemical purposes of combustion and respiration only was deduced from analyses and calculation. The paper excited great interest, and the thanks of the society were unanimously given to Mr. Richardson, who, in acknowledging it, said that his next paper would be on the quantity of air required for the dilution and dispersion of noxious gases produced in mines.—*Swansea Herald.*

### CANNEL COAL—GAS.

We have had forwarded to our office some specimens of a newly-discovered Cannel coal. It is found at Boghead, near Bathgate, a little to the west of Edinburgh, and appears to be very highly charged with gas; indeed, so much is this the case, that when a piece of it is lighted at a taper it ignites as freely as a piece of wood, and can be carried about in the hand, burning like a candle; and hence we are induced to give it this particular notice.

This coal will probably enable gas manufacturers to meet the wishes of the public (particularly in London), by supplying gas of a higher illuminating power, and greater durability, than that generally used hitherto in England. The coal employed in London, and most parts of England, for the production of gas, has been, up to the present time, either the Newcastle or Wigan Cannel coals, or the caking coals of the English and Welsh coal-fields. Now, these coals, although of first-rate quality for household purposes, have not proved so well adapted for the manufacture of gas as the Scotch Cannel coal hitherto employed for that object; whereas the newly-discovered coal alluded to above is stated to produce gas of an extremely valuable and pure description, and taking its extra yield into account, it appears to be 50 per cent. superior to any of the coals now used for gas-making.

The great objection hitherto to the use of Scotch Cannel coal in London has been the expense of transporting it from the collieries. But this becomes obviated, in a great measure, by the new discovery; for, while the yield of the best descriptions of Cannel coals employed, up to this time, is only about 10,000 cubic feet per ton, an analysis of the newly-discovered coal by the well-known chemist, Dr. Effe, of Aberdeen, shows that it yields upwards of 14,000 cubic feet of gas per ton. In addition to this, the durability of its gas is considerably above the average; and while the illuminating power of 5 ft. per hour of the gas produced from Newcastle and Wigan Cannel coals does not exceed that of 25 standard candles, and the gas produced by the caking coals of England is not, upon an average, more than that of 16 or 18 candles; and the gas of the Welsh and Dean Forest coals is only equal to 9 or 10 candles, it appears, from the before-mentioned analysis of Dr. Effe, that the illuminating power of 5 feet per hour of the gas of the newly-discovered coal exceeds that of 38 standard candles. But another striking advantage of this newly-discovered coal is, that its gas is particularly adapted for mixture with that produced by the inferior Parrot and coking coals; for, by this admixture, the gases of the last-mentioned coals are greatly improved, both in durability and illuminating power. Indeed, it has been hitherto almost exclusively used in this way at the Scotch gas-works, it having been found to be even too strong and rich when employed alone.

Being convinced that, notwithstanding the great agitation which has been carried on of late in London, with the view of obtaining cheap gas, it is even of far higher importance to the public to procure gas of a superior quality to that hitherto used. We shall be happy to find some of our metropolitan gas companies availing themselves of this newly-discovered coal, and, at the same time, confirming, after a fair trial, the highly flattering report made by Dr. Effe as to its illuminating power and durability. Should the doctor's statement prove correct (and we have no reason to question it), this gas employed, together with that extracted from any of the low-priced Scotch Cannel coals (such as the Lochgelly or Lamphenan), would not be expensive, and the result of the admixture would be a splendid gas, adapted for use in the most costly apartment, and affording light of far greater brilliancy than that derived from candles; nor would a much inferior result be obtained by mixing it with the gas now usually extracted from coking coals.

**COAL FOR GAS.**—The *Journal of Gas Lighting* has an elaborate article on the comparative lighting powers of different kinds of coal, and the respective values of their residuary products. From this article we have compiled the following table. Five cubic feet per hour of the gas produced by each description of coal, it must be understood, gives a light equal to the number of candles stated in the first column of figures. The second column shows to what proportion of the cost of the coal the residuary products are equivalent.

|  | Candles. | Per cent. |
|--|----------|-----------|
| Scotch Cannel.....                     | 20 to 33 | 5 to 20   |
| Newcastle (Ramsay's) Cannel.....       | 22 to 25 | 30        |
| Wigan Cannel.....                      | 20 to 23 | 30 to 35  |
| Newcastle Coking Coal.....             | 11 to 15 | 40 to 55  |
| Durham ditto.....                      | 12 to 15 | 40 to 45  |
| Yorkshire ditto.....                   | 10 to 13 | 45 to 50  |
| Lancashire ditto.....                  | 10 to 12 | 45 to 50  |
| Cumberland ditto.....                  | 10 to 12 | 35 to 40  |
| Gloucestershire ditto.....             | 10 to 12 | 30 to 35  |
| Cheshire ditto.....                    | 10 to 12 | 30 to 35  |
| Somersetshire ditto.....               | 9 to 10  | 40 to 45  |
| Staffordshire ditto.....               | 9 to 10  | 35 to 40  |
| South Wales and Dean Forest ditto..... | 8 to 9   | 45 to 50  |

This table may teach the public how fallacious it is to suppose that gas can be sold at the same price, with the same profit, all over the kingdom. The lighting power of the coal, the value of the residuary products, the extent of consumption, must all be taken into consideration. We must also bear in mind, that the residuary products of the same coal vary in value according to locality. Coal tar, for instance, sells readily at Newcastle;—in an inland town, a few miles distant, the gas directors know not what to do with it.

**WATER GAS.**—A company has been projected in America, with a capital of \$500,000, for carrying out this invention. At a meeting of the shareholders, it was decided that the privilege of lighting many of the States should be put up to competition, and so sanguine was the feeling of success, that the premiums so realised amounted to \$119,600 above the capital stock. It is said that machinery is preparing as fast as it is possible to turn it out for various parts of the States. The celebrated Astor-house has for some time been lighted with water-gas, at a cost of about one-fourth that previously charged for coal-gas, the light being equal.

**A "BLACK DIAMOND" FOR THE GREAT EXHIBITION.**—An extraordinary piece of thick coal, weighing from 5 to 6 tons, has been cut and dressed by Joseph Cockney, the butty, at Mr. Roand's Fivdale Colliery, Tipton. The coal is of circular shape, 6 ft. high, 6 feet diameter, and 18 feet in circumference; the surface is remarkably smooth, and as bright as a looking glass. It is intended to forward it for the Exhibition, on the trolley, or wagon, as it now stands, with the tackle used in raising it, picks, &c., complete.

**THE INDUSTRIAL EXHIBITION OF 1851.**—The important colony of Canada is making great exertions to be worthily represented in the Great Exposition. Ninety packages, the first instalment of about 300 intended to be forwarded, are already on their way thither, and are daily expected to arrive; they are consigned to Mr. H. Houghton, of Friday-street, the agent here of the Canadian Executive Committee. These packages contain raw materials and manufactured goods—ores, minerals, grain, cloths, carpets, mechanics' tools, &c. The principal object which the Canadians have in view is to show that the small capitalist, who purposes to emigrate, stands as fair a chance of succeeding in that country as elsewhere. The various grains reared in England are produced there abundantly; there are mines of iron, lead, copper, coals, and other natural productions, which might be advantageously worked. We understand that Mr. Logan, the eminent geologist of Canada, will be deputed by the Canadian Government to superintend the arrangement of the ores and minerals in the "chrysalis palace."

We stated in our last Journal that the Rocky Bar (California) Mining Company had declared a dividend of 100 per cent.; we have since been informed that "the adventurers are chiefly experienced miners. Some of the specimens of auriferous quartz from their location are the richest which have ever been found in California, and the vein is apparently unlimited in extent; from experiments, it is estimated that it will yield an average of 20 cents of gold to 1 lb. of rock. The machinery, which will be in operation next spring, will easily crush 40 tons per day, which will give a net daily product of \$16,000, or \$4,800,000 per annum, of which expenses of all kinds may probably eat up \$500,000 or \$600,000. The means for the present dividend have been derived from the bed of the river, and not from crushing the rock."

**MINERAL WEAIR OF THE CLEVELAND HILLS.**—Ironstone is now worked in the Cleveland (or Yorkshire) hills, near the well-known headland called "Eaton Nab." It is brought down by a tramway to the extensive ironworks of Bolckow and Vaughan, a distance of three miles, and conveyed for smelting to their works at Witton. Report speaks favourably of its quality.

**CURIOUS FACT.**—While one of the workmen employed at Mr. Gilbert's marine lamp manufactory, Falmouth, was making some tin solder (which is done by melting tin and lead together in an iron kettle, and which, for greater facility in use, is dipped out with a small ladle and poured on a sheet of iron in thin cakes or slabs), without any design on the part of the man, one ladleful was accidentally poured; and he was in the act of pouring another, when he was surprised to find that the first had produced a most extraordinary medalion profile of "the Iron Duke." General Wood and several other competent judges have seen it, and have expressed themselves as surprised at the likeness.

### THE IRON TRADE OF SOUTH STAFFORDSHIRE—PAST AND PRESENT.—No. II.

The document of the 23d Nov., treated more especially upon the manufacture of malleable iron, giving a short history of its progress through the last half century. No less important, however, are the improvements which have taken place during that period in the manufacture of pig-iron. Instead of the effective blast engines of the present day, were substituted common blow bellows, worked by water-wheels; instead of the huge coke fires that now illuminate "midnight darkness," were to be seen charcoal fires; for, to a certain extent, was this carbonic oxide then used to assist in smelting the ores, instead of the efficient structures that now exist; the furnaces of that period were more cupolas, in comparison, and the "cast" exceedingly small. By contrasting the past with the present, we are enabled to mark the progress made; and, although we cannot expect that future discoveries in the manufacture of iron will be anything like the past, still where is the individual possessing such a knowledge of the future as will enable him to negative a question of the kind? That the structure of the blast furnace has undergone a vast improvement cannot be denied; that it is capable of still further improvement, the future will determine. We cannot suppose, however, that much more will be done to economise fuel in the furnace, or that a less amount of minerals will suffice than is now required, for we cannot obtain more iron from the ore than it is capable of giving, neither can we impart a strong body to weak coal; if the process of calcining ironstone could be dispensed with, a less quantity would suffice; but, as no other means exist of extracting its inherent impurities, which must be kept out of the furnace, so must the present system be maintained.

From the table published in last week's *Mining Journal*, it will be seen that 92 furnaces out of 144 are now in blast in this district—a considerable depression this, and yet an outcry is sometimes heard that too much iron is being made! Now, manufactured iron cannot be produced in a greater ratio than the make of pigs will allow; we will suppose then, that the average weekly make at these furnaces is 100 tons each (and, as most of them are worked by hot air, such a quantity will be obtained), giving a total make for the week of 9200 tons. It will be remembered that we last week gave the assumed quantity of finished iron now made in the district, at 6460 tons; if we add to this one-fourth, as an equivalent for the waste of manufacturing, we shall have a weekly consumption of pig-iron of—say, 8000 tons; but, as a portion of Shropshire, Blaenavon, and North Staffordshire pigs are worked by a certain class of manufacturers, we will suppose that 7500 tons weekly are taken from the South Staffordshire furnaces for manufacturing purposes—thus leaving 1700 tons weekly for the requirements of the foundry, and, as in the entire district an extensive trade in this branch is carried on, such a quantity will no doubt be consumed; it is, therefore, quite evident, that an accumulation of pig-iron to any considerable extent is totally impossible; the pig maker is altogether dependent upon the local consumer, and generally regulates the produce according to his requirements. It is quite true that large stocks of pig-iron now exist in the district, but they are not the result of over-production in the present day; the majority was put into store when iron commanded a much higher price than it now does, and when, indeed, this article glutted the market; speculators were then induced to purchase, and they have since been compelled to hold their stocks, for it would hardly answer their purpose to throw them upon a falling market—hence the cause for the present accumulation in the district, and, whatever may be the extent of their stocks, we may venture to take it for granted that it represents a true statement. Not so, however, with our Scotch neighbours, for it is a difficult matter to know rightly how to estimate their assumed stocks, as periodically given, so greatly does the notorious "scrip" system interfere with a legitimate state of the case. The Scotch pig trade, however, can hardly be placed in an analogous position with South Staffordshire, because it is essentially one for exportation. The quantity of pigs locally consumed in Scotland, compared to the quantity exported, is very small, and that district can only be taken as furnishing an index to the foreign trade—hence it is that it has suffered so intensely from the convulsions abroad, and when affairs there become more settled and consolidated, so that no obstruction is offered to commercial transactions, the trade in Scotland will take a higher stand, for not only do such interruptions prevent a regular trade, but the possibility also of seeking new outlets to take off a surplus or increased production.

A very great achievement has been accomplished in bringing the manufacture of iron to what it now is; an immense capital has been expended, and now that the article is so shaped as to adapt itself to the wants of the world at large, every encouragement should be given, and every stimulus afforded, so that the enterprising zeal of manufacturers be fully and amply rewarded. Our own Government, too, should do all they can to assist the case; it is not enough in times of depression like the present, to say "you make too much iron, and must cut down your produce to meet the times;" this is an alternative to which they are driven; they have at all times a heavy burthen to bear, and especially so in times of depression. If foreigners will not take British iron, there must be a cause, and that cause cannot arise from the circumstance that they can produce it cheaper than the British makers can supply it. Manufacturers, whether taken in their individual or collective capacity, cannot take the place of diplomatists, and negotiate foreign tariffs; but the intercession of the Government of such a nation as Great Britain can assuredly effect a great deal in the matter. The only access we have to foreign nations is through the medium of diplomacy, and it surely cannot be a very difficult matter for British representatives to use arguments in favour of British manufacturers, especially when the strength of argument is of necessity so much in favour of the latter? Were British consumers to say to foreign corn growers, "we will not take corn from you, although it answers our purpose to do so," they would probably meet it by saying; "but you cannot do without our produce; you know we can supply it cheaper than you can grow it, and your nation at large feels the advantage; besides, our vessels have now free access to your ports, which is an additional advantage to us;" and why cannot the British manufacturer so address the foreign consumer in reference to his produce? Simply because the great barrier of protection interferes, and, so long as it continues, is a manifest injustice to him.—E. T.: Tipton.

**IRON MANUFACTURES AT NEWCASTLE.**—A correspondent directs our attention to the rapid progress which is making in the iron ship-building trade at Newcastle—all the owners of the different yards being busily occupied with the construction of iron sailing vessels, and paddle and screw steamers. With respect to the iron trade at that place, the depression, as far as regards prices, still continues; but the demand is stated to be decidedly improving. The *Gateshead Observer*, of last week, says—"It is a singular fact, that an iron East Indianman is now being built by Messrs. Coutts and Parkinson, on the River Tyne, for the River Clyde. Such, indeed, are the superior facilities now afforded on the Tyne for the building of iron ships, that the eminent London firm of Miller, Ravenhill, & Co., are about to establish a yard near Walker, where they propose to construct the hulls, and have the steamers fitted with engines, leaving the completion of the vessels to be executed on the Thames. At the present moment, we have lying in Gateshead, at the goods-station of the York, Newcastle, and Berwick Railway, an interesting illustration of the advantages afforded by this district for carrying on manufactures of which iron is the staple material. The beams of steam-engines, as most persons are aware, have hitherto been made of cast-iron—which is liable to break. The attempt to make them of malleable iron, was never dreamt of; and when we state that rolled beams are now to be seen at the above depot, the announcement will be received in many quarters with surprise, if not incredulity. We saw the monster plates, however, with our own eyes (the largest plates ever yet rolled), measuring 17 feet in length, 4 feet 8 inches in breadth at the widest part, and 1½ inch in thickness. Each plate weighs upwards of 1 ton 4 cwt. These plates were manufactured at the Derwent Ironworks, Consett, and are on their way to Messrs. Tod and Macgregor's works in Glasgow, to form part of a large marine engine; they are much lighter, and, consequently, less cumbersome, than the ordinary cast-iron beams, and infinitely safer. They will lie a day or two at Gateshead, before they are sent off to Glasgow. It is expected that they will produce a sensation on the Clyde."—The *Sunderland Herald* of yesterday says—"We understand that several sets of beam plates, of similar extraordinary dimensions, have lately been manufactured by the Derwent Iron Company, and that there is great probability that malleable iron will supersede the use of cast-iron in all large steam-engine beams. It possesses equal strength, at less than one-quarter the weight of cast-iron, and is a much more satisfactory material in every way, especially as any defect is at once perceptible. Cast-iron, on the contrary, may be very unsound, though to all appearance quite perfect. This is another instance of the rapid progress of manufacturing skill in this district. So recently as the construction of the Britannia-bridge, the contractors had great difficulty in procuring plates weighing 6½ cwt. each. In the short space of time which has since elapsed, so rapid has been the improvement in this branch of iron making, that we see plates nearly four times that weight rolled in the ordinary course of business."



## Original Correspondence.

## OPEN SHAFTS UNFENCED.

Sir,—Often as accidents have happened to men and beasts from the unfenced state of shafts, and often as the agents of mines have been advised to protect life by fencing such shafts, very many, I am sorry to say, are still quite open; so that a man in the night might unconsciously walk in, and so might horses and cattle. It has been frequently remarked, respecting open shafts, that they are rarely covered or fenced round until some life is lost. Now, it is very foolish to wait till then—the duty should be performed to prevent the loss of life, which, when lost cannot be restored, as everybody knows. In passing through a sett in the parish of Camborne, this day, and yesterday, I saw several deep shafts with tops level with the surface, having great funnel "mouths" ready to devour all who pass by. I would advise agents, having the management of mines, to see to it, that no life shall be lost through their dereliction of duty. Let them ascertain the extent of the evil, and at once apply the remedy by an effectual fencing. In most, if not all, mine leases the adventurers are bound to fence the shafts; they are everywhere bound by the dictates of humanity to do it.

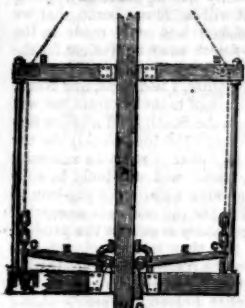
Truro, Dec. 3.

R. S.

## SAFETY CAGE FOR MINES.

TO THE EDITOR OF THE GLASGOW PRACTICAL MECHANICS' JOURNAL.

Sir,—Having read an article in the *Mining Journal* of the 9th Nov., on some improvements in mining machinery, by Messrs. White and Grant, of Glasgow, I have sketched out, for your examination, a plan of safety apparatus which occurred to me some months ago, but has never been carried out. The principle on which I have worked—is the assumption that it is not the actual insufficiency of the rope which causes fracture, but the repeated shocks or sudden tensional strains sustained each time the lift comes upon it. To obviate the injurious effects of this sudden action, I thought of adopting draw-springs, with the intent of bringing the tension gradually upon the rope. Again, in case of accidental breakage, or the occurrence of over-winding, the draw-springs were to act upon levers and force wedges against the guides to sustain the cage, the latter, of course, being fitted with a detaching link.



The outline sketch represents my proposed plan, in elevation, looking on the side of the cage guides, one only of which is seen at A. The two dotted lines represent the two cage chains, depending from the winding rope. These chains pass over guides at B, and are connected at C, with the spring links or tension rods of the volute springs, D, one of which is represented through the break in the cage platform. At C, the chains are also linked to the ends of a pair of levers, E, working on fixed centres at F, the opposite short arm of each lever being jointed to a holding wedge, G, one only being shown. The cage is supposed to be loaded, the weight being upon the springs, D, and the wedge free, but should the rope fail, the reaction of these springs will draw down the long arms of the levers, and jam the wedges against the guides. The latter are made a little narrower at the top and bottom landings, in order that the spring may regain its position at each stoppage in readiness for the next movement.—JOHN G. WINTON: *Cherry Bank, Leith.*

## THE SLATE STRATUM OF IRELAND.

Sir,—In perusing your Journal last week, my attention was attracted to a letter from Mr. Davies, on the slate stratum of Ireland. Being myself a little interested in a slate flooring quarry, situated in that country, I trust you will do me justice in allowing a small space to make a few remarks; or, rather, to ask Mr. Davies a few questions. Mr. Ashdon, in a previous Number, entered into a calculation, showing how the Wicklow manufacturer could realise 12. 10s. 8d. more profit upon a ton of slabs than the Runcorn manufacturer, which Mr. Davies failed to contradict; he only stated (though not very satisfactorily proved), that all slate services could be purchased cheaper of the London manufacturer than at the Welsh quarries. Does Mr. Davies take it for granted, if the Welshman is so far behind in skill and science, that the Wicklow manufacturer must follow the same habits?

What does Mr. Davies mean, when he says that almost every domestic service is made of slate? and does he assume the same slate strata to be precisely the same quality at any given distance? And, finally, is his having changed his line of business the reason his opinion is so changed since the long debate at the Railway Hotel, with regard to the Irish slate stratum?—C. A. P.: *Exeter, December 3.*

## ATMOSPHERIC INFLUENCES.

Sir,—However great may be the enjoyment of the philosopher in his communion with Nature, and exquisite his delight on the discovery of a fundamental principle, the fruits of his labours are appreciated by the greater portion of mankind, in so far only as they can be rendered applicable to the supply of our wants. I am, therefore, induced, in reference to that part of my letter of the 25th Nov., which treats of the cause of dampness in buildings, to investigate the cause, and then endeavour to suggest a remedy for the evil.

Wet on walls in buildings was formerly referred to two causes—the ascent of moisture by capillary attraction, and soaks through the wall from external wet. The first of these is now generally abandoned, but the second still prevails to a very considerable extent, although generally the amount of wet is in proportion to the hardness of the material of which the wall is composed; and it increases still more, if the interior of the wall be painted—facts utterly opposed to such a notion.

That the atmosphere becomes close and oppressive before heavy falls of rain, more especially before thunderstorms, is a fact not to be questioned; and on reference to the papers by "S.," published in the *Mining Journal* for 1849, it will be seen that this atmospheric condition is referred to the abstraction of electricity from the lower regions by the formation, in the upper regions, of large masses of snow—a highly crystallised body, a quadruple compound, and the original form of rain.

The atmosphere, then, of the lower regions being negative, has the property of holding in solution a large amount of vapour, and is, in fact, in the same condition as that of a room, the temperature of which is raised by the combustion of gas in it, or the respiration of a number of individuals; and as matter, during decrystallisation, evolves free electricity, the rain resulting from the "thaw" of the snow is necessarily charged with that fluid. When, therefore, the rain falls on the external walls of a building composed of a hard stone, which is a good conductor of electricity, the fluid rapidly passes to the interior surface; and bodies in opposite electrical conditions attracting each other, the vapour of the atmosphere of the room is rapidly drawn to, and deposited on, the surface of the wall, in the same manner as it is condensed on the surface of a bottle containing cold water.

Thunderstorms frequently discharge hailstones of a great size, and the drops of rain are invariably of larger dimensions than those of a winter shower; and although we may not be able to comprehend the nature of the conditions in the upper regions, which induce the thaw of snow at an altitude above that at which crystallisation takes place, any more than we can understand what induces them in a freezing mixture, it is obvious that the drop of rain having been formed in its passage through a highly electric cloud, and then through a negative atmosphere, may first undergo condensation, and rapidly increase in size; and if condensation should not take place, the drop of rain must necessarily increase in size—the operation being, in every respect, similar to the accumulation of moisture on the inner surface of a wall.

Condensation on walls, and on the banister of the stairs, frequently takes place before rain; and, so far as I have been able to determine, the amount of deposition is proportional to the previous duration of fine weather—a fact that cannot fail in throwing much light on the relative electrical condition of the earth and the air, the electricity, under these conditions, being supplied from the soil, which is positive to the atmosphere. The correctness of this reasoning, I should think, would be disposed to question; and if any doubt should exist, the following experiment, I think, cannot fail in removing it:—If two tumblers, containing a hot solution of alum, be insulated in a dry atmosphere, raised to the temperature of about 80°, and one of these tumblers be connected by a fine copper wire, with an external wall, crystallisation will take place much more rapidly in the connected vessel than in the other, if rain be falling against the wall; and the reverse effect will take place if the wall be heated by the rays of the sun. The solution may justly be considered to represent the negative atmosphere of the room—the crystallisation of the salt, and condensation of the vapour, being alike produced by the same agent.

If, then, dampness in buildings be mainly referable to the condensation of vapour by electricity, supplied by rain and the soil, when positive to the atmosphere, it is self-evident that the means at present had recourse to can avail but little; and although in London, where the houses are constructed of bricks, which is a porous material, and a bad conductor of electricity, little inconvenience is experienced from this evil, in other districts, where a hard stone is used, the case is very different; and, as an instance, I may mention that a house in Dublin, in which all the usual methods had been tried to

rectify the evil, but to no avail, remained for a long time uninhabited. I suggested, however, that the nature of the material composing the walls be determined; and, on examination, it was found to be a hard black limestone, when I proposed that the atmosphere of the room should be insulated from the wall, and this was accomplished by the ordinary system of battening lath and plastering, which removed all cause of complaint. This, however, is an expensive process, and objectionable for many reasons, more especially on account of its being a harbour for vermin, and liable to damage; I would, therefore, suggest the use of coarse, stout brown paper, which is an excellent non-conductor, as a lining to all such walls, and if it were steeped in hot pitch its quality would be improved. This, I am quite sure, would prove a cheap and effectual cure; but as regards the second cause, the electricity from the soil, it would be difficult to apply a remedy, since, to do so, it would be necessary to underpin the walls with a good non-conductor. As, however, medical men, for many complaints, now insulate the beds of their patients, it is unquestionably deserving of consideration whether, both for the preservation of health and the building itself, it may not be desirable, in the original construction of our dwellings, to insulate them from the ground; and in a paper which I submitted to the consideration of the commissioners for completing the new Palace, Westminster, two or three years since, for the accomplishment of this desirable object, I proposed the use of black glass, to be introduced above the ground course, where it would also act as a bond to the wall.

On reference to the papers by "S.," it will be seen that in 1846 and 1847, when the potato disease prevailed, the atmosphere was positive to the earth, but that during the prevalence of influenza and cholera, the air was positive to the atmosphere; and although I should think to be expected in any human contrivance, still the instrument which has elicited these important facts may be considered as bordering on it—in proof of which, I may remark that the evaporations from the insulated and non-insulated vessels were, for July, 690 to 65 grains, and for August 160 to 70; but in September they were 50 to 180. Now, towards the close of August, the potato disease showed itself, but has since disappeared, and, comparatively speaking, we have had no epidemic diseases of the cold description; but such as have prevailed have been of an inflammatory nature—facts, I should think, sufficient to render it imperative, on the part of the Executive, a reference to my apparatus, in conjunction with the valuable information published by the Registrar-General. The hygrometer is now, however, admitted, I believe, to be faulty in construction; but I am told that I have proposed nothing in its stead, as if any such proposition were necessary; surely the instrument that has condemned it recommends itself to notice.

I am much obliged to Mr. Lake for his information, that the electric flame of a galvanic battery induced chemical action, and, in return, beg to inform him that, if he will put his finger on an intensely cold mass of metal, he will find that an action is set up, in every respect similar to that induced by electricity. He, however, claims priority to the discovery that the atmosphere of a body is in an opposite electrical condition to that of the body itself; and I have invited him to apply that discovery to his reasoning on the temperature of this globe, which he states need not be hot but cold, and is surrounded by an intensely cold atmosphere. If he will do this, he will, I am sure, have to unsway all that is contained in his last letter.

Canterbury-place, Lambeth-road, Dec. 2.

Author of *Electrical Condition*.

## TERRESTRIAL MAGNETISM.

Sir,—I have no doubt but that your readers will easily perceive that Mr. Lake's observations, in his last, are peculiarly applicable to himself—viz.: "the singular instances of the affection of the human mind for error," and the usual turn of the argument into assumptions and presumptions, in preference to the experiments and observations of others.

Finding the experiments and observations actually made in the region in question did not suit his views, Mr. Lake, to use his own words, "throws the whole overboard," and gives us, instead of demonstrative proofs, a list of authorities, whose respective researches, however interesting they may be, do not by any means agree; and much less, as he says "conclusive in favour of the electric currents flowing from the equator towards the poles." Such a mode of replying may satisfy Mr. Lake, but it will not your readers, especially those who are seeking for the truth, and desiring to separate knowledge founded on assumptions, from knowledge founded on facts.

Halley's theory of magnetism was extremely crude. He supposed there were four poles—two of them changeable in position, and the other two permanently fixed. The mechanism which he proposed for effecting the continual change in the variation was too crude to be admitted, even at that age. However, Halley only suggested it as a conjecture, to explain the observed phenomena. After dwelling on the mechanism of the internal globe in which one of his magnets was placed, moving with a different angular velocity from the external shell in which the other magnet was situated, he, nevertheless, entertained but little hope of finding any hypothesis that would account for all the phenomena; and hence he urged the necessity, in the true spirit of a philosopher, of determining the actual details by means of direct observation. I have too much consideration for your valuable paper to discuss separately the several theories supported by observations made by Humboldt, Sir J. A. Ross, or any other eminent observer of that portion of the hemisphere. The currents have but one definite direction from the south towards the north, and only subject to deviations and undulations in their linear path from local and solar influences.

I repeat again, most distinctly, that there are no places from the south pole to the tropical zone, whether aerial, sub-aerial, aqueous, or sub-aqueous, terrestrial, or sub-terrestrial, where magnetic currents are found going to the south from the equator; nor are any such notions supported by observations made by Humboldt, Sir J. A. Ross, or any other eminent observer of that portion of the hemisphere. The currents have but one definite direction from the south towards the north, and only subject to deviations and undulations in their linear path from local and solar influences. My maritime friends of the Pacific and Atlantic, who have to traverse this zone to and fro periodically, would be sadly perplexed in their steering, had such an equatorial current as Mr. Lake speaks of existed. Mr. Mallet very justly remarks, if such had been the case "in passing the magnetic equator, the pole of the needle would be reversed, the needle would whirl round, 'the north pole pointing to the south, and the south pole to the north'; and to make the absurdity still more glaring, the currents would evolve at the equator, as an equatorial film dividing the globe into two parts, issuing positive and negative side by side. I can well conceive, from reading Mr. Lake's letters, that he is not yet prepared to enter into the general subject laid down by Mr. Hopkins, and his knowledge appears more dependent on others than independently his own, consequently it could be of no avail, to advise him to advise him to send his papers in future to be revised by the living authorities quoted, before submitting them to print; it would then afford them the opportunity of erasing those conjectures which have subsequently been found untenable.

Mr. Lake states that "the experiments given by Mr. Hopkins afford no proof that the surface of the earth is moving to the north, although they represent operations going on in Nature;" and again observes—"Neither can geological proofs be received as to the direction of the existing electric currents, for we cannot tell when the strata acquired their present positions, whether gradual, or at the creation, or at the flood, or during any great convulsion of Nature." What a conglomeration!

The experiments alluded to demonstrate a mere effect produced by the action of two poles. The geological proofs of Nature abundantly testify similar effects by structure movements, and accumulation of the southern organic remains in the northern hemisphere, and, consequently, represent operations which have been, and still are, going on in Nature. Further, the existing electrical currents in action, internally and externally, are still in the same direction. The observations made respecting the strata, and great convulsions, are not sufficiently clear to deserve comment; and your geological readers will, doubtless, perceive from such observations that Mr. Lake is not yet versed in the elements of that science.

Mr. Lake then proceeds to state "that the success of Mr. Hopkins's work on *Terrestrial Magnetism* affords *prima facie* evidence of the correctness of the whole principles illustrated in it." The electro-chemical effects of the electric currents are the same, without reference to the direction in which those currents move, whether from pole to pole, or from the equator towards the poles; hence the good results from following Mr. Hopkins's views when applied to mining operations—the principle being correct that the electric currents produced those deposits; his error is as to the direction of the currents, which does not vitiate the practical result.

Now, it is perfectly evident Mr. Lake has neither read nor studied Mr. Hopkins's work, otherwise he could not have drawn such conclusions, as "that the direction of the currents does not vitiate the practical result," because this is the grand fundamental base of Mr. Hopkins's principles of geology and magnetism through the whole of his work, and on which all questions connected with terrestrial dynamics are predicted, be they magnetism, geology, mineral veins, currents of the ocean, terrestrial attraction, and the causes of the perpetual mutations and variable temperatures.

Mr. Lake refers to Barlow's experiments, and quotes his first and second laws of magnetism. Now, had he expatiated, and duly reflected on them, it would have obviated the necessity of my making further observations in your Journal, and would have shown the necessity of being well guarded in building theories on such data. Mr. Lake repeats his principles of human assumptions, founded on imperfect experiments and incorrect analogies, and which must be swept away in the progress of scientific truth; whereas, those I have brought forward are observed facts, and include many other interesting scientific questions, not dreamt of in Mr. Lake's philosophy.

Mr. Lake's postscript shows that he is almost an isolated being, and not within the reach of scientific bodies, where such questions are discussed and published, otherwise he would have known that my arguments are almost matters of history. I recommend Mr. Lake to ascertain in future what is really going on in the scientific world, apart from borrowed and antiquated notions.

Mr. Lake must excuse my style of writing—perhaps I am too plain, and somewhat blunt in my remarks; but it has appeared to me, when attempting to wade through some of his papers, that they are something analogous to a hop, skip, and a jump at conclusions, which my intellectual powers are not capable of following. However, if he can obtain any single individual who is willing to act as a cicerone, to explain what is really meant, and make head or tail of them, he will confer, as I have said before, a favour on those of your readers who wish to receive useful information from your Journal, as well as on your humble servant—ALBERT DEMAREE: *Upper Montague-street, Montague-square, Dec. 2.*

RAILWAY CALAMITY.—The amount falling due in December is 287,304*l.*; in the same month last year, it was 576,904*l.* The aggregate called this year amounts now to 10,629,377*l.*, against 19,673,694*l.* in 1849.

RAILWAY PASSENGERS' ASSURANCE COMPANY.—This novel and useful institution seems to progress in all quarters where its merits have been promulgated, and the frequent occurrences of railway accidents proves it to have been a desideratum; for had it been long before established, many poor families might have been relieved from that helpless poverty to which they have been subjected through railway casualties. It appears, from the records of the company, that, up to the present time, 44 cases of personal injury have happened on railways to parties assured, which have been met by payments varying in amount up to 210*l.* Two fatal cases also occurred, where each party had insured his life for 500*l.*; one was that of James Shiels, an engine-driver, who was severely crushed between two carriages, from which he died at the infirmary. The 500*l.* due to the widow would render her independent, to a certain extent, of grants from the railway company, or of petitioning for the support of herself and family. This case is a striking contrast with that of a guard, killed a few weeks ago; but who, not being insured, left a wife and family totally unprotected. The other fatal case was that of William Pike Grant, who was killed in the same manner at Peterborough—the sum for which he insured (namely, 500*l.*) having been paid to his widow. These instances of seasonable relief, in cases of calamity, must exhibit the great public utility of such an institution as the "Railway Passengers' Assurance Company."

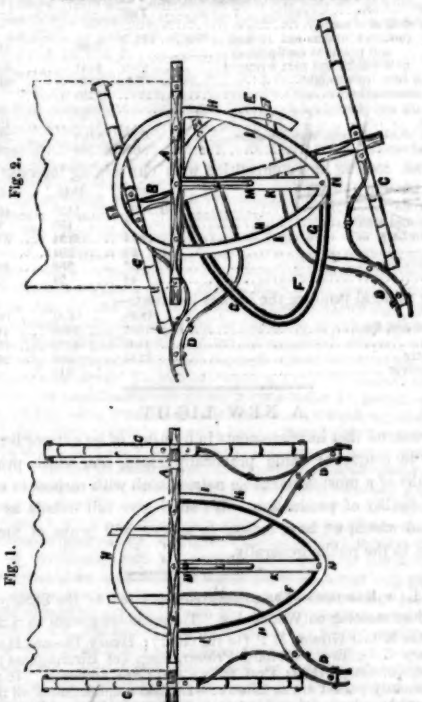
## ON THE GEOLOGICAL AND MINERAL FEATURES OF CERTAIN DISTRICTS OF NORTH WALES.—No. V.

BY ST. PIERRE FOLEY.

In speaking of the continuation of veins or lodes, it is right to remark that in tracing them in extent or on line of bearing, we may sometimes lose either the one or the other, so as to appear as if we had arrived at their termination; and the same may be remarked on sinking on their angular dip. Yet these disappearances may depend on natural occult causes, or on the mechanical or disarranging effects of what are called *heaves, slides, bars, cross-courses, dykes, &c.*, well known to every miner; and, instead of the lodes or veins having come to their final points of termination, they may be discovered at some distance (sometimes considerable) from these points, on or near the original ranges of these very lodes, pitched for the moment, as it were, to some point of the compass either to the right or to the left, but still retaining the same direction of bearing; or, if different, it will be seen to have a tendency to recover its original range near the new commencement of the lode or vein on the forward side of the heave, &c., and then it will generally be found to have recovered this range in some distance, unless prevented by similar adverse forces to those above-mentioned. Now, on sinking on lodes, and on keeping a correct register of the various appearances, changes, and values of these lodes, we often perceive very extraordinary and striking differences. Sometimes the lodes are exceedingly rich in ores, perhaps quite solid; at other times scarcely a speck of ore to be seen; then nothing but *spar, peach, cash, sulphur, ore, or a confused conglomerate of rock, &c.*, and, again, in rare cases, even without those disturbing causes above alluded to, the lode seeming to pass into miserable strings of quartz, with specks of ore here and there, just showing that the ore is still "alive." Yet with all these variations of value, the discerning agent knows very well what he may expect in his gradatory pursuits, and can pretty correctly give a fair decision as to final results. He will not cry out "*Jo triumphe*" on meeting with rich bunches of ore, nor yet wail the "*miserere*" on coming on poor or "dead ground," he will pursue "the even tenor of his way," without looking to aught save the main object—to put his mine in a proper effective state as soon as possible, so as to insure a due production of ores to pay in regular periods—in a mining-like manner, and on the most economical mode of doing so—safely and securely to his employers, and with manly and honourably credit to his own honest head and heart.

The study of veins and lodes, then, is indeed a most interesting study; but this alone can be attended to with profit to himself or others, in the very mines and mountains themselves—that is, carefully noting all surface indications; paying due regard to the geological formations of the mines, and localities in which the mines are found; observing the mineral character of the country, whether productive in ores or otherwise; the structure, dip, and general bearing of the strata; whether the mineral veins or lodes run with "the country" or agree with the bearing of stratification, or cut across, as it were, the great range of rocks and the angle thus formed. Then, in regard of the veins or lodes—whether these be true mineral veins of any value or metallic lodes; their breadth; extent, if possible, if continuously regular, their angular dip, *broile* at surface, *gozney* constitution, and such other notices as will be instantly caught up by the quick eye of the practically-educated miner. Mining inquiries pursued by attention to the above, and then collating with *proof* conclusions drawn from similar indications, and views observed in other mines, will enable the miner to report and to direct the development of such mineral lodes or veins as may be deemed of importance, with that confidence which is always necessary to govern works of this description, so as to insure a successful issue. There are several mineral veins and some metallic lodes of great mining interest on the Cwm Cypwrth and Gilvach setts, to which I mean to draw the particular attention of the reader in my next article, as examples of veins and lodes in almost all the varieties above enumerated. Their extent, nature, and produce, as well as their mining and geological positions are, I consider, of importance and high value, and as I mean to give them the benefit of speaking for themselves, I beg to refer to next week's Journal for that hearing.—*Lincoln's Inn-fields, Dec. 4.*

## IMPROVEMENTS IN CARRIAGE-BUILDING. MIDDLETON'S CENTRIPETAL WHEEL-PLATE.



It has long been an object of great interest among carriage-builders to improve upon the wheel-plate commonly used for four-wheeled carriages. Family carriages are required to run so light, that they shall be quite within the compass of one horse, and the only means of accomplishing this is to lessen the draught. To effect this, the hind and the front wheels must be brought much closer together than the common wheel-plate will allow. There have been one or two inventions for throwing the front wheels further back by means of an improved wheel-plate, and it must be admitted that considerable ingenuity has been displayed; but in no instance does anything appear to have been brought to such perfection as the ingenious contrivance of Messrs. Middleton (of 40, Long-acre)—the arrangement being such that, as soon as on the lock, the whole of the fore carriage works forward, independent of the body, and is never, by any means, thrown out of the centre, which is not the case with any other invention.

Fig. 1 of the diagram shows the carriage in a straight position, being thrown full 10 in. further under the body than usual, bringing the wheels that much closer together. Fig. 2 shows the carriage on the full lock, when the bolt, M, has slid down the full length of the groove, L, guided steadily down by means of the bolt, N, running in the groove, G G, of the transom plate, thereby allowing the wheels room to work under the body. The great superiority of this over every other contrivance is, that the carriage is as much central when on the full lock as when running in a straight line, which allows it to work with as much ease as the common central perch bolt, and the arrangement is so simple, that it is no more liable to get out of order. In appearance, the elliptical form of the front part of the wheel-plate is lighter, and more ornamental than the old circular form; moreover, as it has been adapted to a very elegant little carriage by the proprietors, and found practically to answer every purpose, we feel persuaded that it must soon be very generally adopted.



## ON PATENT LAW REFORM.—No. I.

BY DAVID MURPHY, ESQ.

I wish your correspondent, "T. W.," had offered a detail of some plans for the other desirable objects which he considers are not provided for in the contemplated reforms of Patent Law, especially the latter, the most difficult and the most important—that of rendering "the legal decisions more easy, expeditious, cheap, and decisive." I quite agree that the mere reduction of patent fees to 5*l.* or 10*l.* per annum, will lead, at the least, to a great deal of disappointment, and probably to much increase of litigation and perplexity. There are numbers of persons overvaluing, as inventors are very apt to do, the power of their own ideas, who conceive there is no barrier between them and unlimited success but the large amount of the fee, and that nothing else is required but to bring down the price of the title of their purchase. Besides a great deal of other disappointment, these persons would certainly find themselves embarrassed at all points by the equal facility which was given to dishonest invaders. I do not think the absolute reduction of the ultimate amount of fee is a matter of nearly so much moment as facilitating the first steps of the grant. To effect this, the great point has already been suggested of giving a firm title on payment of a small fee, with such an interval before specification and enrolment as may enable the patentee, *guarded against piracy*, to offer his idea fairly in the market, and practically test its efficacy. The capitalist will no longer shrink from buying his pig in a poke; the seller will cease to go in dread of letting his cat out of the bag; and if the patent be really worth anything at all, the 100*l.* fee, assuming the inconsistent Scotch and Irish extras abolished, would never prove a serious obstacle to right, though yielding a certain protection against wrong. Nationality, as it is now called, is rather out of fashion, or it might be worth while to consider the American Law of Patents, to see if we can derive either lesson or warning from their practice. To an American, a patent is granted for the low sum of 13*l.*; but, as I presume, by way of retaliation for the high charge we cast in the way of ourselves and others, a British subject has to pay 120*l.*; whilst foreigners, whose native demands are less immoderate, receive their patents for about 70*l.*

I should have been glad had your correspondent suggested details upon his second point—opposition to a patent grant. The check by caveat would still exist; and I can hardly see how anything further could safely be attempted, without incurring the collection of such evidence as would prove fatal to secrecy. But his third point is that of far the most importance and difficulty, the appointment of a proper tribunal to try patent cases—so difficult that, notwithstanding its importance, I should greatly regret if the other reforms were delayed in the hope of achieving it. To contribute the plan of such an effectual tribunal would be the greatest boon that acuteness and sagacity could confer on the patent interest. It is the grand desideratum; but I confess I am not sanguine of seeing it accomplished. The uncertain title of patent property has its strongest ground in the inherent nature of the property itself. The novelty which gives it merit is the source of its insecurity. There is no adage more approved by experience than that "possession is nine points of the law." The most favourable position of a patentee is when he has already in operation a manufactory to which he can apply his process. Even, then, he holds no better possession than any other manufacturer who has the daily command of the same facilities; but when, as most often happens, the patentee is without such opportunity of practising his invention, but depends for its adoption on those who have, he is not only without any priority of possession, but he has literally no possession at all. This is the fertile source of litigation and uncertain decisions. The dishonest manufacturer defies the right, and grasps its fruits. Trusting to the delay and precarious issue of law proceedings, he holds possession as long as he can; whilst the hapless inventor is steering his way amidst inextricable shoals in an unexplored navigation, which furnish every advantage for an iniquitous defence; and he is called upon to prove at one and the same time that his invention is new and old—old enough to entitle himself to it, and new enough to disentitle any one else. These are the very essentials of his unstable title; and, unless a general reform of law could be effected—such as Cromwell attempted, but not even he could carry through, the quill proving stronger than the sword—I have not yet seen any plan for a new tribunal which holds out any reasonable hope that an alteration in name would alter the substance, or that the men who formed this court would be any less fallible in their decisions than the men who form our present courts of law. I do not believe any patent of real value can be considered safe until it has been litigated. It is into that world of troubles that such novelties must be inevitably born. I do not see how they can escape, so long as there is wilful dishonesty on every hand watching to wrest to its own advantage the accidents and immature features of infancy. Judges are often possessed with extraordinary prejudices; but so are men of other classes. I should feel no confidence that the decisions of practical men, as they are termed, would be more constantly free from crochets than those of men of science, or that these would be more comprehensively just than the dicta of the present men of law. It is true, it is easier to build a new house from the foundation than to remodel an old one; but I hardly see how a court could be constituted entirely independent of the existing courts of law and equity—certainly not without extinguishing the power of revision and appeal, which would hardly be desirable or consistent. Even as matters are, there is little more required than that judges should habitually introduce a more full spirit of equity into these cases, rather than meet them with impatience, that strange matters which they do not understand are brought before them, which never occurred in their reading. With this object, it would prove most valuable if some person, who united the legal acquirement necessary for the task, with the comprehensive information essential to review decisions in their true light, would digest a compendium of important patent causes, showing the merits and demerits of the results, to assist in warning and enlightening the existing courts. It is seldom there can be any difficulty in a jury deciding upon evidence which party in a suit is seeking what does not belong to him, especially if the judge fairly directs them. Twelve intelligent men of any calling are as capable of forming a just opinion upon such a state of things as the most practised man in the pursuit which is in question, and who may have acquired prejudice with practice. The moral sense can always judge of the right and wrong which is brought before it; and there would be less difficult litigation if the judges recurred in this spirit to the equity of the case, rather than to the refinements of verbal interpretation. The purpose of courts of equity is to dispense justice in such cases as constantly arise, which cannot be provided for under the strict letter of statute or common law. Cases which are uncommon cannot be tested by the latter, and emergencies which have never arisen cannot have been determined by statute; therefore, in a patent trial, a court of law becomes more than in any other case a court of equity. The judge is set free from verbal trammels, to see that justice is done between man and man upon the aboriginal principles of honesty and truth. We often hear an upright judge give his decision with regret, when fettered and bound by some legal form, to deny justice to a party to whom he feels and declares that it is really due. It is, therefore, more surprising that judges should be ever found so revelling in the delights of verbal confusion as to sell their brother to oppression for a phrase, not only without expressing regret for the injustice they unnecessarily administer, but exercising research to darken truth, as if words were things, and things only the signs of them. Believing the uniform extinction of this iniquitable spirit in our courts of law would be the most direct and easy reform to render patent property more secure, I shall crave leave to make a few remarks upon a patent case, which is a complete compendium of iniquity, the most comprehensively bad which has come under my notice. The exposition of so much evil may, I hope, stimulate some one with better acquirement and ability to search the whole record, and make the general digest of blunders which I have suggested. Some months since, I gave in your pages a general outline of its features, to support views then under discussion; but I did not exhaust its merits. It is a countless treasury of vice and modern instances—the patentee's *vade mecum*—a sort of executioner's catalogue—where he may find a complete list of every instrument of distortion and destruction he must expect to be subjected to, and until this hive is thoroughly rifled, it would be needless for me to seek further, as I proposed to do, for other honey to season the argument. The especial engine I wish now to attend to is the judgment of the Court of Exchequer, delivered by Baron Parke, on the defendant's motion for a new trial, in which the verdict of the jury establishing the plaintiff's right was set aside by a metaphysical interpretation of the intentions of the wrong-doer—a feature never before introduced into a question of civil rights. Had the question been betwixt the gallows and the pillory, there might have been cause shown why the culprit should only be consigned to the latter; but that any particular condi-

tion existing in the mind of A should so alter the property of B as to cancel his title to it, is so novel, that it becomes of no little consequence to trace the anatomy of such an abortion of the judicial mind.

The right of the plaintiff was established by verbal evidence, and the knowledge of that right by the defendant was proved by his own letters, written whilst he was using the process with the plaintiff's permission, until the evil thought occurred of defying the right, and defrauding him. There cannot be a question that Baron Parke, who tried the cause, was as perfectly convinced as the jury that the defendant was using a process of which plaintiff was the sole originator; and that, by permitting him and others so to use it, the plaintiff was deprived of the entire benefit which he had purchased by his letters patent; and that this benefit was being appropriated by persons who had no other merit, title, or connection in the discovery, except the resolution to introduce it into the arena of the law; yet, in the face of this full knowledge and belief, he could deliver a judgment in their favour, wherein no motive can be discovered, except it were to darken counsel by words without understanding, and gratify a certain pique, or prejudice, towards "scientific men," which kept peeping out in divers flings or kicks at intervals through the trial.

[To be concluded in next week's Mining Journal.]

## ON THE VENTILATION OF COLLIERIES.

The discussion on Mr. Struvé's paper, on "The Ventilation of Collieries, theoretically and practically considered," as read at the Institution of Civil Engineers, and published in the *Mining Journal* on the 23d November, was continued at the Institution throughout two following evenings, to the exclusion of any other subject.

The principal points of the paper were explained to the members who were not present at the reading of the paper. Great stress was laid on the advantages of splitting the current of air, so as to reduce the velocity of its transit through the mine, and to afford a full supply to the most remote points of the workings. The high temperature in the upcast shaft, necessary to produce the requisite velocity of current in the galleries of mines, when furnaces were employed, was adduced in favour of the employment of Struvé's mine ventilator, or other mechanical means of drawing out air through shafts which were also used for drawing the coal, or raising the men to the surface. The wasteful application of steam, in the form of a jet, was insisted on, and contrasted with the small power actually employed at the Eaglesham Colliery, for giving motion to Struvé's mine ventilator. These statements were fully confirmed. It was shown that the speed of the mine ventilator could be regulated to produce any requisite velocity of current in the galleries, and that it was an efficient indicator of the occurrence of any stoppage in the air passages, as on the supply of air being arrested, the machine would soon be stopped.

In the best mines of the north, furnace ventilation was found to be most efficient, and the stated danger apprehended from the firing of the gas at the furnace, was concluded to be more ideal than real. Nevertheless it was admitted, that a good simple mode of mechanical ventilation merited the best attention of the owners of collieries. Fans for forcing air down into mines had been tried, but were found inefficient, although considerable power was consumed in propelling them.

The difficulties found in using mechanical exhausters were then attributed in a great degree to the small size of the inlet and outlet valves, and the improvements introduced by Dr. Arnott in the apparatus for ventilating the New County Hospital, at York, were instanced as examples of the necessity of using curtain valves, of large area, for the machines, as it had been found that as the dimensions of the valves were increased the power required to work the machines diminished. The most beneficial effects had resulted from the use of ventilating machines similar in principle to Struvé's mine ventilator, in hospitals, and on board crowded emigrant and convict ships, and by proper attention to the area of the valves, the power required to work them was very small. The application of small water-power engines, like those made by Mr. Armstrong, of Newcastle, for giving motion to the ventilating machines, was recommended as very effective and most economical.

The importance of large air channels in short lengths, for furnishing ample supplies of air underground, was admitted by other speakers, who, however, objected to the application of mechanical ventilation, preferring its being effected by natural means, which it was contended could be attained by a judicious system of "winning" arrangements. When, however, this is not practicable, Struvé's apparatus was approved as the best hitherto introduced. A somewhat similar but less perfect system had been used for some years in Germany, Prussia, Belgium, and in some mines in England. The system of sinking shafts on the dip, for the advantage of collecting water, without considering the tendency of gas to accumulate in the upper cavities of the workings, was deprecated, and the more advantageous plan proposed of having the downcast shaft on the dip, and the upcast on the crop, whereby an easier exit would be provided, and a more effective ventilation be established.

The application of the steam jet was advocated, and instances were given of its efficiency in clearing the after-damp from pits where explosions had occurred. It was argued, from experiments, that the steam jet could be rendered much more efficient than the furnace; but no statement of the relative expense of this plan, as compared with mechanical ventilation, was entered into. The evidence given before the House of Commons in 1835, the House of Lords in 1849, and to the South Shields Committee on Accidents in Coal Mines in 1843, was carefully analysed, with the intention of demonstrating that, beyond certain limits, it was useless to force furnace ventilation, as, under certain circumstances, a current of cold air was found to descend the upcast shaft, forming a false brattice, and arresting the ventilation. The steam jet was stated to be capable of such increase of power, and of such varied application, as not to be subject to this inconvenience. It was contended, on the other hand, that, in reality, this natural brattice was seldom perceived, and that, when it did occur, the system of sealing off a portion of air at some distance up the shaft sufficed to destroy it. It was shown that mechanical ventilation was essential to clear away the choke or after-damp, so as to enable a mine to be entered after an explosion, when it might be dangerous to light the furnace at the bottom of the pit; but by setting the machine at work with increased velocity, a much greater circulation of air could be caused under any circumstances of barometrical pressure, and the mine could be cleared in a short time. Had this system been adopted, the dreadful effects of the choke-damp after explosions would have been frequently obviated, and much waste of human life might have been avoided.

**SARSAPARILLA.**—Considerable importations continue to be made of this important drug. In 1840, 142,920 lbs. were entered for home use. The duty was then 6*d.* per lb.—it is now only 1*d.*; and the quantity annually shipped from the United States to this country has been steadily and progressively increasing. This result, however, is less due to the reduction in the tariff than to the persevering efforts of American enterprise, to place so potent and valuable a medicine within the reach of the masses. About 10 years since a new mode of preparing the extract was discovered by Dr. Townsend, of Albany, and a manufactory was forthwith started in that city. The sale soon became so enormous, that the introduction of machinery for the preparation of the extract became indispensable, and the establishment has now attained such a magnitude, that it is numbered among the local lions. Between 100 and 200 men and boys are employed during the proper season in collecting the roots, which are subsequently rasped and ground by powerful steam-engines. The vats in which the decoction is prepared are larger and more numerous than have yet been previously used in the preparation of any medicines; and, by their instrumentality, the finest Honduras sarsaparilla, which is the only kind employed, is quickly converted into a healthful and delectable syrup, an invigorating elixir, concerning whose alternative powers upon the human system no great difference of opinion has ever prevailed among physicians. The statistics of manufacture, as given in the American papers, are highly interesting. From 1500 to 2000 barrels of the root are annually imported from Honduras, and 5000 bottles of the extract are turned out ready for consumption every day—a quantity equal to 1,500,000 bottles per annum. The bill for glass at this manufactory exceeds \$120,000 a-year, and the consumption of boards for packing cases is over 2000 square feet daily. The money which was expended last year in advertisements reached \$90,000, in addition to which there was a gratuitous circulation of 7,000,000 circulars and almanacs. Not only are large quantities of the preparation consumed throughout the different States of the Union, but extensive shipments are made to the Canadas, the West India Islands, South America, and Europe. The physiological influence of this invaluable medicine appears to consist in the power which it possesses of gradually purifying the blood. It is growing into great favour with ship masters as a preventive of scurvy, and the fact is worth noting that, during the war with Mexico, while fever and dysentery were thinning the ranks of the American army, under General Taylor, the officers were paying as much as \$60 per dozen for the extract.

## COMPANIES PROCEEDING UNDER THE WINDING-UP ACT.

**THE GODOLPHIN MINING COMPANY.**—In the Vice-Chancellors' Court on Saturday, Mr. Pollett, moved, on behalf of two contributories, that the order of Master Sir G. Rose, making a call of 4*l.* per share, might be discharged, or that the same call might be suspended until the accounts had been taken. The learned counsel stated that the operations of the Godolphin Company were carried on in Cornwall, the accounts of the concern being kept and the whole business being managed by three of the directors. In 1846 the company was dissolved. One of the directors, Mr. Groult, was stated to have lent in various sums to carry on the business 4000*l.*, and that amount he claimed. The Master, to meet this and one much smaller debt, had made a peremptory order for a call without having investigated the accounts. The Master had also, against the remonstrances of the counsel for the alleged contributories, appointed Mr. Stainsby, another director, the official manager. Mr. H. Clarke, for the official manager, referred to clauses of the Joint Stock Companies' Winding-up Acts, to show that the balance-sheet made out in the office was declared to be *prima facie* evidence of the liabilities of the company, and that on such a sheet being made out of the Master was authorised to make a call. His Honour said the better course will be, without prejudice, to suspend the call until further orders, and to refer it to the Master to investigate the three items mentioned in the balance-sheet under the head "liabilities," including Mr. Groult's claim, and to report whether, and under what circumstances, for the same, or any and what part thereof, the Godolphin Mining Company is liable, with liberty to state special circumstances.

**TONTINE LIFE ASSURANCE COMPANY.**—Sir W. Horne has finally settled the list of contributories, the executors of a shareholder named Clarke being willing that their names should be placed on the list in respect of 500 shares, the testator having signed the Deed of Settlement. It appears from the report of Mr. Croydall, that under the Deed it was agreed that the original directors should retain office for the first five years; that 5 per cent. on all the shares of which the company might consist within 10 years should be apportioned to its projector, and 15 per cent. thereof to the directors and treasurer, with liberty to any of them to accept or reject the same, and if the latter, to be sold, the purchase of them to pay all the calls. The company was established in Pall-mall, and within 1846 and 1849 three separate secretaries were appointed. To promote the prosperity of the undertaking, and inspire confidence in the public, a peoples' branch for granting loans and annuities to the industrious classes, was opened in New Oxford-street, but at a loss of 567*l.* The deposit of 20*s.* per share was not fully paid up, and out of the 2000 defaulters, 300 were among the directors. The total payments were 8571*l.*, and expenses and losses, 7433*l.* Of the 12,950 shares allotted, 7660 were taken by the directors, and 5290 by the projectors; leaving only 1790 for the public. His Honour, on application, allowed the claim of Mr. Wiswold, for bill of costs of 100*l.* incurred in an abortive attempt to wind-up the company, subject to taxation; but refused that of the Hon. Mr. Curzon, Hon. T. Rowley, and other directors, incurred in opposing the petition to wind-up. The official manager now proposes to make a call of 20*s.* to defray the liabilities.

**HEMP AND FLAX MANUFACTURING COMPANY.**—Mr. Gilmour, counsel for Mr. Green, of Edinburgh, made application to have that gentleman's name struck off the list, on producing his certificate of bankruptcy, and stating that, according to the law of Scotland, Mr. Green was exempt, as an insolvent, from all liabilities on the payment of 1*d.* in the 1*l.*, which he was willing to do. The application was acceded to. A long discussion took place relative to the non-production of an alleged Deed of Settlement, to which it was asserted Lord Talbot (late Viscount Ingestre) and other directors of the company were parties, respecting the transfer to the company of an extensive property at Rugeley. It was stated that no deed had ever been executed, and that it had never gone beyond the mere form of a conditional draft. This was produced before his Honour, who animadverted on the singularity of its having appended to it the original signatures of Lord Talbot, Mr. M. Matthews, and Mr. Donlan, the trustees, but which had been subsequently struck through with the pen.

**UNIVERSAL GAS-LIGHT COMPANY.**—Sir George Rose has allowed the claim of Mr. Fessenmeyer, the late solicitor of the company, for 1070*l.*, subject to the taxation of Mr. Harding, the official manager, if he had a right to tax, which is to be determined by petition to the Vice-Chancellor. The claim of the executors of Mr. Grenaway, the late secretary of the company, for 67*l.*, was allowed.

**DIRECT WEST END AND CROYDON RAILWAY.**—Master Tinney has placed on the list of contributories the name of Mr. Byrom, of Wigan, he having applied for 25 shares in his character as a provisional committeeman. It is now ascertained that 60*l.* from each of the provisional committee will suffice to settle the affairs.

**DIRECT BIRMINGHAM, OXFORD, READING, AND BRIGHTON.**—Mr. Hutton, the official manager, has been instructed, by Master Brougham, to appeal forthwith, at the expense of the estate, against the order of Vice-Chancellor Rolfe in the case of Walstab, the effect of the decision of the Vice-Chancellor being to remove all allottees from the list of contributories as liable, and, consequently, forming one of the most important decisions hitherto come to under the Winding-up Act. Owing to the importance of the principle involved in the case, an opportunity will be taken to obtain a hearing at the earliest sitting in the ensuing session.

**DIRECT LONDON, PORTSMOUTH, AND CHICHESTER.**—There were 100 original allottees on the list who applied for shares, and who had them allotted, without paying the deposit, but who, on payment of 2*s.* per share, received back their letters of allotment, without any cancellation of the original contract. Counsel on behalf of Mr. Bleadon and other allottees contended that the contract being an inchoate one, it was not legally binding, more particularly as it was stated that 95,000 shares were allotted, when in reality there was only 86,000. After considerable argument on the part Mr. H. Harris for the official manager and others, his honour decided that the application for shares having been acceded to by allotment, and the parties having subsequently made payments, the contract in question was complete, and that no cancellation had in effect taken place, nor had the committee of management any authority to make such cancellation, even had they done so. He must, therefore, place these gentlemen on the list as liable.

**LONDON AND SOUTHERN.**—Sir George Rose has erased from the list of contributories Mr. Scratton, one of the provisional committee, in conformity with the decision of Vice-Chancellor Knight Bruce in the case of Brewitt, but retained on the list the executors of Mr. P. Skipper, on the ground that he had attended meetings, at which a variety of expenses were ordered to be incurred.

**OXFORD AND WORCESTER JUNCTION.**—Sir G. Rose has placed on the list as liable the remainder of the members of the committee of management of this company who, by a financial "scheme" drawn up by themselves, had each a "reserve" of 500 shares, intimating that as it was clearly their own act and deed they must be content to take the consequences. The liabilities in this company will most probably be defrayed by calling upon those persons to pay up the deposit of 2*l.* 2*s.* on such shares as they took, and who did not originally pay it.

**RUGBY, WARWICK, AND WORCESTER.**—Master Richards has allowed the claim of Messrs Hall and Smith, the solicitors, amounting to 560*l.* The assets of the company are about 8000*l.* in the hands of the Accountant-General, and the liabilities about 7000*l.* There is a claim on the part of the Northamptonshire Banking Company of 3300*l.* About 20,000 shares in the company were allotted, and 40,000*l.* received as deposit; 5600 shares were bought up by the directors at a premium in the market, and 9000 shares were reserved, it is alleged, for landowners. The 40,000*l.* was spent in "Parliamentary preliminaries," and the last rendered accounts of the company exhibited a balance of 2*l.*

**SHREWSBURY AND LEICESTER.**—The list of names on the provisional committee amounts to 1103, and on the allottee list to 500; and the liabilities to be liquidated between 5000*l.* and 6000*l.* The first case taken was that of Mr. Brittain, of Sheffield, one of the provisional committee, who paid 63*l.* in that capacity, part of which, it was alleged, was in recognition of the share letter of allotment, and the other to pay off creditors. Mr. Manesty, counsel for Mr. Brittain, argued at length, that his client could neither in law nor equity be liable, on the ground that he and others only lent their names to the prospectus as "ornamental members" of the company, to make it worthy of public attention; and on the further and more forcible ground, that in the letter of allotment there was an express stipulation, which Mr. Brittain, his client, did not comply with in respect of his 25 shares, to the effect that unless the allottees paid the deposit and executed the subscribers' agreement and Parliamentary contract they would not be recognised as subscribers to the company, or be entitled to any interest whatever in the undertaking; consequently, under the Act, Mr. Brittain could not be considered a member of the company, and had only paid the 63*l.* *pro causa pacis*. His Honour observed, that as the particular points in the consideration of this question were new and important, he would take time to consider.

**THE CARRIERS AND RAILWAY COMPANIES.**—The question which has been so often litigated between the carriers and the railway companies, as to the right of the former to receive a package of small parcels under the tonnage rate of one, was again brought before the County Court of Surrey a few days ago, when, after the postponement of the decision for a week, judgment was delivered as follows:—"After taking considerable time to examine into the merits of this case, I am of opinion that the case 'Pickford v. the Grand Junction' does not apply; that the defendants' Act applies only to heavy goods to be charged by the ton; that the company have a right to charge in accordance with the notice set forth in their time and fare-tables for the conveyance of parcels; and I consider those charges reasonable, for it would be unfair and against reason to say the company, having the work to perform and the responsibility, should not be allowed to protect themselves against the evasion of their just and reasonable charges. I, therefore, give judgment for the defendants, with costs."



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#### "HUTCHISONISED" MATERIALS, FOR BUILDING, &c.

We are glad to announce that the long-litigated cause "Hutchison v. Teychenne" was finally settled in the Vice-Chancellor's Court, on Thursday. The suit, it will be recollected, was instituted to obtain from the defendant, Francois Teychenne, a native of France, carrying on business as a purifier of leather boots at Redcross-square, Cripplegate, the benefit of letters patent. It appears that M. Charles Le Goux, of Bayeux, in Normandy, invented a process, which he denominated litho-pyrogen, having for its object to infiltrate soft stone with matters which harden and render it impermeable, and for which he obtained from the French Government a *brevet d'invention*, dated in December 1843. Some negotiations took place between these two parties, and the defendant Teychenne proceeded to Normandy, and on his return, in April, 1846, instructed Messrs. Barlow and Le Caplain, patent agents, to enter a caveat, who accordingly, on the 6th of that month, entered the same in the Joint names of Francois Teychenne and Charles Le Goux, describing them as of Redcross-square, Cripplegate, and Paris; and on the 10th August he obtained the letters patent, the subject of the suit, in his own name. Mr. Hutchison afterwards bought the interest of Le Goux. The cause was heard in this Court on the 4th June, 1849, when his honour sent an inquiry to the Master whether it is a trustee of the whole letters patent for the plaintiff (Mr. Hutchison), and that the same be deposited in the Master's office, and let M. Teychenne pay all the plaintiff's costs to the present time, reserving the time of such payment; and let there be an inquiry as to any expenses M. Teychenne might have incurred as agent for M. Le Goux, or Mr. Hutchison, or either of them.—Mr. Cooper offered to pay 200*l.* as such expenses, without going into the Master's office.—Mr. Russell declined to accept that sum on behalf of his client.

Mr. Cooper and Mr. Terrell were heard for the plaintiff. Mr. Russell and Mr. Hetherington appeared for the defendant Teychenne.

His Honour said, he was satisfied that a caveat was entered by M. Teychenne, as agent for M. Le Goux, and that both names were used to facilitate subsequent arrangements. He thought at the hearing that some agreement might have existed, but none was shown then; and although so long a time had elapsed, none was yet shown; and he concluded could not be proved. The defendant (Teychenne) was originally an agent on account of M. Le Goux; and his Honour entertained no manner of doubt but that he was a trustee for that gentleman, and as such, was, as a trustee for Mr. Hutchison, and so considering, he should so declare. The declaration was that Teychenne is a trustee of the whole letters patent for the plaintiff (Mr. Hutchison), and that the same be deposited in the Master's office, and let M. Teychenne pay all the plaintiff's costs to the present time, reserving the time of such payment; and let there be an inquiry as to any expenses M. Teychenne might have incurred as agent for M. Le Goux, or Mr. Hutchison, or either of them.—Mr. Cooper offered to pay 200*l.* as such expenses, without going into the Master's office.—Mr. Russell declined to accept that sum on behalf of his client.

#### IMPROVEMENTS IN MANUFACTURING IRON AND STEEL.

The cause "Hutch v. Unwin," for infringement of patent right, was tried for the third time in the Court of Common Pleas on Saturday last. At the first trial, which took place in the Court of Exchequer, in 1841, the plaintiff was nonsuited. At the second trial in the same court, in 1844, the jury found for the plaintiff on all the issues, but leave was given to the defendant to move to enter a verdict on the plea of "not guilty," and a rule for that purpose having been obtained, the Court, after argument and deliberation, made it absolute. The late Lord Chancellor, and also the late Vice-Chancellor, who had directed the action, refused to grant the rule, and the case was brought before the Court of Exchequer, the latter stating that "he thought what had been stated as the opinion of the judges of the Court of Exchequer was fraught with very dangerous consequences." He, therefore, gave the plaintiff liberty to bring another action, and the plaintiff accordingly commenced the present action in this Court.

The Solicitor-General, Mr. Sergeant Byles, and Mr. Webster, were counsel for the plaintiff; and Mr. Humphreys, Q.C., Mr. Chambers, Q.C., and Mr. T. Jones, for the defendant. The plaintiff claimed, amongst other things, the use of carburet of manganese in any process for the manufacture of cast-steel, whereby it was clearly proved that its quality was greatly improved, and that it was rendered easily malleable. He described his process thus:—"I propose to make an improved quality of cast-steel by introducing into a crucible bars of common blistered steel, broken up into fragments, or a mixture of cast and malleable iron, or malleable iron and carbonaceous matter, along with from one to three per cent. of their weight of carburet of manganese, and exposing the crucible to the proper heat for melting the materials, &c.; but I do not claim the use of any such mixture as part of my invention, but only the use of carburet of manganese in any process for the conversion of iron into cast-steel." The carburet of manganese had been originally formed by oxide of manganese and coal tar, subjected to considerable heat, and being so formed, it was cast into the steel crucible. But this was in all respects a very expensive process, and subsequently the plaintiff discovered that the introduction of coal tar and oxide of manganese into the same melting pot as the iron or steel would have the same effect as the carburet, and save the expense of making it. He accordingly issued what was known in the trade as "Hutch's process," being a mixture of coal tar and oxide of manganese, worked into a paste. The defendant had been originally an agent in Sheffield for the use and sale of the plaintiff's invention; but he subsequently propounded a method of making steel, which the plaintiff alleged to be an infringement of his patent. The defendant's plea was, that he "placed blistered steel in a crucible, together with certain proportions of black oxide of manganese and carbon, which would become fused at a certain heat, and would combine and form the carburet of manganese before the blistered steel, which would require a much greater heat to fuse it, could be worked upon by the ordinary heat of the furnace, and that the defendant, in doing this the defendant never meant to use carburet of manganese at all; that he never knew, and there was no reason to suppose that any one but the plaintiff knew, that carburet of manganese would be formed in a state of fusion; and that as there was, therefore, no intention to imitate the patented invention, the defendant could not be considered guilty of any direct infringement, if he did not intend to imitate at all.

A number of scientific witnesses were now called for the plaintiff, including Dr. Ure, Mr. Brande, Mr. Cooper, &c., who deposed that the use of carburet of manganese in the making steel was unknown before the plaintiff's patent, and that it was a most beneficial discovery. They also stated that the method of making the carburet in the same crucible with the steel was a very great improvement upon the original mode of making it separately, and that, if the attention of scientific men had been directed to the subject, they believed their opinion would have been that carburet of manganese would be produced by the fusion of oxide of manganese and carbonaceous matter in the crucible.

Mr. Humphreys, Q.C., addressed the jury for the defendant, and admitted that both before and since the last trial, the defendant had made steel in the manner above described; but he denied that this was the method described in the plaintiff's patent, and that there had been any infringement of it.

Mr. Justice Cresswell said, the question was one rather for the Court than the jury, and consequently he felt bound by the decision already pronounced in the case by the Court of Exchequer. He should, therefore, direct a verdict for the defendant, giving the plaintiff leave to tender a bill of exceptions, so that the matter might be determined by the superior court.

#### ACCIDENTS.

**Holmshurst Mine.**—James Francis, while in the act of tipping over a tram wagon, containing some large stones, a loose flannel coat which he had on caught in the wagon, and he was whirled over and fell with the wagon a depth of about 20 feet. He survived about two hours, and has left a wife and six children. He had borne a good character, and had worked at the mine about 17 years.

**Aberdeen.**—T. Thomas was killed while employed at the Cwmavon Works.

**Alarming Boiler Explosion at Bolton.**—A serious accident happened at Messrs. Baldwin's colliery on Tuesday. The boiler belonging to a whimsy, situated between Baldwin and Moxley, and which worked four coal pits, burst, and the explosion was terrific. One part of the boiler was forced in the direction of the turnpike road, a distance of 150 yards, and taking with it the corner of a house, descended on the railroad, breaking the rails, and then rebounding, was carried over the hedge, and across the turnpike road, where it fell. A horse and cart and two women were in close proximity, but happily escaped uninjured.

The other part of the boiler was carried in the opposite direction, towards the Pot House Bridge, a distance of 200 yards, taking with it a part of the engine, and throwing down the stack and the brickwork to a great distance. The mainshaft and fly-wheel were broken to pieces, and a small boiler, which was by the side of the large one, was carried a distance of 12 yards; and the whole of the machinery was scattered in all directions. The engineer, John Johns, who is a very steady workman, had just left the side of the boiler as the accident occurred. He was very much scalded, but is going on favourably. It is said that the accident cannot be accounted for; the boiler was cleaned and repaired the previous day. Seven or eight men and women were working on the pit bank at the time, close to the engine, but they all most providentially escaped.

**Durham.**—At the Little Chilton Colliery, John Maddison, a bankman, while walking along the gangway leading to the apparatus that separates the small coal, accidentally fell from the wall upon a wagon, by which he was so severely injured that he died.

**Branspeth Colliery.**—Nicholas Keegan, aged 25, while in charge of two wagons laden with coal, proceeding down the incline, was crushed against a coke truck, and killed.

**Derbyshire.**—A man, named Cocker, was killed at the Spelthigh Iron-works, near Chesterfield. William Merchant was sadly injured at the same place: he had been told by his companions that one of the pits was not safe, but would persist in going down it. He had been employed a short time, when the gearing at the top gave way, and fell upon his leg, breaking it so as to render amputation necessary.—*Derbyshire Reporter.*

**Extraordinary Accident and Cure.**—We find the following account of an extraordinary cure in the *Union Medicalist*:—"Phineas Gage, aged 25, employed in the construction of a railway, was engaged in charging a hole made in a rock with powder, in order to blast it, when, supposing that the powder had become mixed with sand, he fired it up with a long iron rod. An explosion instantly took place, and the bar was driven completely through the head of the man and fell a short distance from him, covered with blood and a part of his brains. The iron rod weighed 6 lbs., was 34 inches in length, and about an inch thick. It entered the left angle of the lower jaw, and came out at the top of the head behind the bone of the forehead. The wounded man was knocked down by the blow, but immediately rose again, spoke to the persons round him, got up into a cart, in which he kept standing while it was being driven for more than a mile to an inn, where he alighted and ascended a long staircase, and went to bed in the possession of his mental faculties. A surgeon arrived in half an hour after the accident. The upper part of the head was externally fractured, and the wound at the side of the jaw was large enough to admit the finger. The small pieces of the skull were removed, the larger bones adjusted, and the wounds dressed. We shall not enter into the details of this interesting case, but merely say that the patient promptly recovered, with the loss only of the sight of the left eye."

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